



Carlson and Accor

4,000 branches but
will the tree grow?

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ICL

Leaving the
arrogance behind

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In his own words

De Benedetti on
the Italian elections

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China and the US

Who owes
who a favour?

Page 6

FINANCIAL TIMES

Europe's Business Newspaper

WEDNESDAY, MARCH 16, 1994

Fast growth in US
puts spotlight on
short-term rates

The US economy is continuing to expand rapidly, increasing the chances of another rise in short-term interest rates, figures from the Federal Reserve show. Industrial production rose an unexpectedly large 0.4 per cent in February, following a 0.5 per cent gain in January. The figures suggest industrial output is growing at an annual rate of 7-8 per cent in the first quarter. Page 14 and Lex

Japan's US trade surplus falls: Japan's trade surplus with the US fell for the first time in nine months in February, the Ministry of Finance said. The surplus was \$4.34bn, a fall of 0.9 per cent compared with the same month last year. Page 4

Bayer lifts German hopes: Hopes of an end to the German chemicals industry's four-year profits slump were raised by better-than-expected earnings from the Bayer group. Pre-tax profits were down 12.6 per cent to DM2.35bn (\$1.33bn). Page 15

Sir Peter Inge to be UK defence supreme: General Sir Peter Inge (left) became chief of the Defence Staff - Britain's top military officer - in succession to Sir Peter Harding, who resigned after newspaper allegations of adultery. Sir Peter Inge, 59, a Sandhurst officer who became chief of the General Staff two years ago, had been acting as caretaker military adviser to the government. He becomes a field marshal. Page 8

China wanted in GATT: Members of the General Agreement on Tariffs and Trade, with the exception of the US, expressed strong support for an early resumption of China's GATT membership. Page 6

Italian journalists strike over pensions: Italian journalists began a four-day strike in protest over plans by the government to place some of the surplus in the journalists' pension fund in the main state-operated pensions scheme. Page 3

Portugal's consumers hit banks: Portugal's consumers organised a 24-hour boycott of direct debit cards in protest at an attempt by banks to charge commission on use of the cards. Page 2

Germany to lose 100,000 engineering jobs: Export growth will help Germany's engineering industry increase sales by 2 per cent this year, but a further 100,000 jobs will be lost before a recovery emerges in 1995 or 1996, according to the VDMA industry association. Page 2

Nine Somali bandits killed: Indian peacekeeping troops in Mogadishu shot dead nine Somali bandits who attacked a relief convoy. Page 1

Deloitte to pay \$312m damages: Deloitte & Touche, US accountancy firm, is to pay \$312m to settle a string of government charges that it failed properly to audit several banks and savings and loan institutions which collapsed in the 1980s. Page 4

Wolseley of the UK, the world's biggest supplier of heating and plumbing equipment, reported an 85 per cent rise in interim pre-tax profits to 257m (\$127m). Page 16; Lex, Page 14

Mirror Group Newspapers of the UK marked its independence from administrators and the legacy of the late Robert Maxwell with higher than expected pre-tax profits of 275.8m (\$107.7m). Page 16; Lex, Page 14

Brussels to act on telecoms ventures: The European Commission said it intended taking a more active role in policing joint ventures in the fast growing telecommunications market. Page 14; Merchant bankers brave disdain of Athens, Page 2

Rail costs disclosed: Companies which take over British Rail's passenger operations can expect to pay about £500m (\$730m) a year to lease trains in addition to the £2.2bn they will pay for the right to use the rail network. Page 7

Lyonnais des Eaux-Dumez, French utilities and communications group, reported net profits for 1993 more than doubled at FF980m (\$133m). Page 15

Fire hits California phones: A fire in a telephone switching centre disrupted telephone service to hundreds of thousands of people across southern California.

STOCK MARKET INDICES		STERLING	
FT-SE 100	3,257.4 (+34.0)	New York, lunchtime:	\$ 1,491.5
Yield	4.70	London:	1.4915 (1.4945)
FT-SE Europe 100	1,499.35 (+12.78)	DM	2.53 (2.5254)
FT-SE-A AP-Share	1,546.57 (+0.89%)	FF	8.9884 (8.9799)
Nikkei	20,598.05 (+17.30)	Sfr	2.16 (2.1409)
New York, lunchtime:		Y	198.223 (198.238)
Dow Jones Ind. Ave.	3,869.82 (+2.16)	£ Index	80.7 (80.6)
S&P Composite	468.19 (+0.80)		
US LUNCHTIME RATES		DOLLAR	
Federal Funds	3 1/4%	New York, lunchtime:	\$ 1,491.5
3-mo Treas. Bill Yld	3.642%	DM	1.4925
Long Bond	9.12	FF	5.7725
Yield	8.887%	Sfr	1.4945
LONDON MONEY		Y	106.135
3-mo Interbank	5 1/4% (same)	London:	
Life long gilt future: Mar 113 (Mar 111 1/2)		DM	1.4983 (1.4980)
NORTH SEA OIL (Argus)		FF	5.765 (5.741)
Brent 15-day (May)	\$13.595 (13.350)	Sfr	1.4415 (1.4325)
Gold		Y	106.150 (106.880)
New York Comex (Apr)	\$387.5 (387.2)	£ Index	80.3 (80.1)
London	\$386.25 (387.1)	Tokyo close Y 106.28	

Austria	50.02	Greco	0.550	Lux	1.585	Qatar	0.0130
Bahrain	0.01-20	Hang Kong	1.585	Malaysia	1.585	Saudi Arabia	0.0130
Bangladesh	0.01-20	India	1.585	Morocco	1.585	Singapore	0.0130
Brazil	0.01-20	Italy	1.585	Norway	1.585	South Africa	0.0130
Canada	0.01-20	Japan	1.585	Pakistan	1.585	Spain	0.0130
China	0.01-20	UK	1.585	Peru	1.585	Sweden	0.0130
Czech Rep	0.01-20	US	1.585	Poland	1.585	Switzerland	0.0130
Denmark	0.01-20	France	1.585	Romania	1.585	Taiwan	0.0130
Egypt	0.01-20	Germany	1.585	Slovenia	1.585	Thailand	0.0130
Finland	0.01-20	Belgium	1.585	Slovakia	1.585	Turkey	0.0130
Greece	0.01-20	Netherlands	1.585	Slovenia	1.585	UAE	0.0130
Hong Kong	0.01-20	Portugal	1.585	Slovenia	1.585		
India	0.01-20			Slovenia	1.585		

Microsoft reorganises to meet market challenges

By Alan Cane in London

Microsoft of the US, the world's largest personal computer software company, yesterday announced a worldwide reorganisation to improve decision making and market responsiveness.

It said the new structure was necessary to achieve its goal of doubling sales over the next four years. Last year the company had net income of \$933m on sales of \$2.75bn.

Microsoft says the reorganisation will not lead to job losses, unlike many computer companies which are actively cutting staff. "It will not reduce our overall headcount, but it will allow us to grow without increasing our headcount as much as our current organisation would require," the company said.

A memorandum sent to employees says the company could seize "incredible opportunities" in the next few years, but

implies that competitors, including Lotus and Novell, are superior in sales and marketing. "We cannot just follow and react to what others are doing."

Restructuring is expected to take between two and three months with all the key elements in place before the start of Microsoft's new financial year in the autumn.

The company denied the reorganisation was a response to an investigation of its business prac-

tices being carried out by the US Justice Department. Last year, the US Federal Trade Commission failed to agree whether to proceed against the software company after more than three years of investigation of whether Microsoft had abused its position as market leader.

Microsoft, boosted by sales of MS-Dos and Windows personal computer operating software, has shown quarterly earnings growth of between 25 and 55 per cent

over the past few years. In the first quarter of the current year, however, growth slowed to 14 per cent, causing analysts to suggest that the company was maturing and that competitors were eating away at its market share.

The reorganisation is designed to accelerate decision making, simplify its marketing messages to customers and business partners and improve business efficiency. Seven product groups are to be created to cover, for exam-

ple, personal operating systems and desktop applications. New customer units will have responsibility for individual computer users, organisations and companies which build Microsoft software into their own products.

Microsoft believes central Europe could become its single largest market with the potential of \$1bn in yearly sales.

Regrouping to get closer to the customers, Page 18

G7 urges IMF to
release \$1.5bn for
Russian reform

By John Lloyd in Moscow

The Group of Seven leading industrial countries, fearful that the Russian economy may collapse, are pressing the International Monetary Fund to agree to lend the second \$1.5bn tranche of its fund to assist reform.

Mr Michel Camdessus, IMF managing director, is expected in Moscow tomorrow. During his five-day visit he will have to decide whether to recommend to the fund's board to pay the second tranche of the systemic transformation facility or again delay payment because of fears that the budget will not be adhered to and that inflation - down to a monthly 9 per cent in February - will again soar, as expected.

A continued fall in production and the huge indebtedness in

Russian industry have meant that government income is running at half of the budgeted figures for the first two months of this year.

Meanwhile, powerful lobbies, especially the military, are demanding higher allocations than the present budget allows - with General Pavel Grachev, defence minister, warning that his troops will go unfed unless the allocation to defence of Rbs37,000bn (\$21.6bn) for this year are more than doubled.

One senior western financial expert in Moscow said yesterday: "The base to support the infrastructure of the country is shrinking and at some point soon you will not have enough resources to support the minimum services."

Mr Victor Chernomyrdin, prime minister, has sought to

impress on the IMF - which has a team negotiating with Russian ministers in Moscow - that he and senior colleagues are at least as pro-market as radicals such as Mr Yegor Gaidar and Mr Boris Fyodorov, who left the cabinet this year.

The G7 countries had relaxed their pressure on the IMF and the other international financial institutions such as the World Bank to lend to Russia after the December elections, as the outcome led them to believe that further reform was unlikely.

Mr Chernomyrdin has drawn up a list of companies to be declared bankrupt, has enthusiastically endorsed the sell-off of state and collective farms to individuals, and says he will repel all advances from the military.

Continued on Page 14



Welcoming hands greet Nelson Mandela in Mbabatho, capital of Bophuthatswana. Page 14

Reuters

EU expansion talks face collapse as UK holds out

By David Gardner in Brussels and Roland Hudd in London

Talks among European Union foreign ministers to settle the row over power-sharing if the 12 take in four new members next year were on the verge of collapse last night, with the UK holding out for yet another meeting to settle the issue.

Any further delay on the voting rights dispute might sink chances of Austria, Finland, Norway and Sweden joining the EU next January as planned, and brake the momentum behind the Union's expansion.

The UK, which with Spain is resisting any dilution of its right to block decisions in the EU

Council of Ministers, predicted last night that further negotiation would be needed - possibly at a summit of European leaders.

A senior British government official said: "There will be another meeting, but we don't know the level, the time or the place." But he made clear that the government could not yet work its way around the voting rights dispute, which it acknowledges may sabotage prospects for the "wider Europe" London says it espouses.

"You have to realise how [any weakening of UK veto rights] could play in Westminster" among right-wing, Europhobic members of the British parliament, the official said.

Mr John Townend, chairman of the powerful Tory backbench Finance Committee, said opposition to watering down Britain's rights was spread right across the party. "This is a case of blackmail, to put it bluntly. The Commission is proposing watering down voting rights to have enlargement of the Community."

Mr John Major, the UK prime minister, asked in parliament to clarify the government's negotiating position at the foreign ministers' meeting, said: "What we need to ensure is that democratic legitimacy and the rights of minorities are sustained within the European Union."

One rightwing backbencher

said privately: "The prime minister has been told that he risks his majority in the Commons if he allows the Foreign Office to agree to any compromise over our blocking veto."

However, Sir Norman Fowler, Conservative party chairman, predicted that there would be no revolt by Conservative Eurosceptics over UK voting rights in Europe.

In Brussels, enormous pressure was being placed on the British, including calls for a vote that would expose them as the obstacles to the move from a Europe of 12 to 16. Germany, France, the Netherlands and Denmark all suggested that those who opposed the will of the EU majority on how to manage this first stage of expansion should "go away and reflect", as the Da-

nish foreign minister, put it. The UK wants to change the proportion of weighted votes in the Council of Ministers needed to block EU laws and regulations. Currently, 30 per cent of the votes - distributed roughly according to size among member states - can form a "blocking minority".

Ian Davidson, Page 12

Jobs summit promotes free
trade and labour flexibility

By George Graham, David Goodhart and Stephanie Flanders in Detroit

Ministers from the Group of Seven leading industrial nations agreed yesterday that free trade, labour market flexibility and a stable economic environment were essential to tackle the persistent unemployment that has afflicted all their economies.

However, the unprecedented two-day conference in Detroit produced "no single solution, no one idea or action that will work for every country," said Mr Lloyd Bentsen, the US Treasury secretary and meeting chairman.

The conference yielded a consensus that countries must balance the right macroeconomic policies with measures to attack structural joblessness.

"Structural reforms can make our labour markets and employment systems far more adaptable to change. We need, carefully and in our own ways, to pursue policies to take down barriers and to strengthen our markets," Mr Bentsen said.

Ministers agreed on the need to improve the education, training and skills of their workforces, but Mr Bentsen warned that the G7 countries could produce all the highly trained workers they wanted, "but it does no good unless we've created the climate in which the corporate world has jobs waiting for them."

The Detroit conference's conclusions will form the starting point for the sherpas preparing July's summit meeting of G-7 leaders in Naples. But beneath the apparent harmony, divisions emerged, particularly on the relative importance of government and the private sector.

"I won't say that there were sharp exchanges, but there were some courteous sharp disagreements," said Mr Robert Reich, the US labour secretary. Participants said the meeting had brought together labour and

finance ministers who in some countries seemed scarcely to speak to each other, and the mix had produced some very frank discussions.

Among the most radical ideas that received support was a suggestion to allow employees to work a fixed number of hours in the year, rather than each week, allowing greater flexibility both for employers to deal with seasonal variations and for workers to plan their own free time.

"At a time when modern technology gives us more and more flexibility, why should work time still be planned as it was at the beginning of the industrial revolution?" said Mr Henning Christophersen, European Commission vice-president.

Mr Bentsen said ministers had agreed to ask the Paris-based Organisation for Economic Co-operation and Development to study the relationship between productivity, technology and job creation and to expand a study already under way to improve statistics on joblessness in the industrial world.

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NEWS: EUROPE

Balladur settles feud on defence

By David Buchanan in Paris

Prime Minister Edouard Balladur has settled a feud between his defence and budget ministers over future military expenditure by deciding that armaments spending should rise annually by 0.5 per cent in real terms until the end of the century.

Mr Balladur engineered the compromise as the government prepares to present to parliament next month the 1995-2000 military framework law. This does not absolutely tie a government's hands over annual defence budgets, but since France is likely next year to elect a president from the ranks of the governing coalition - even perhaps Mr Balladur - it will be a good guide to future defence spending.

Mr Francois Léotard, the defence minister, had pushed for a rise in military equipment spending of 2.5-3 per cent a year, taking as his text the recent government-approved defence white paper. It said real "annual growth of at least 3 per cent" was needed to fund all programmes underway, though it acknowledged greater efforts could be made to keep arms suppliers' charges down and foreseen some savings through "a certain pause" in modernising France's nuclear deterrent.

Mr Nicholas Sarkozy, the budget minister, argued that the armed forces should be subject to the same financial discipline as the civil sector. The government's five-year fiscal programme, designed to fit France to enter monetary union with Germany and other European partners by the late 1990s, calls for an average 0.4 per cent cut in public spending in each of the next three years.

Mr Balladur's decision to allow arms spending to continue to rise modestly will appease the strong defence lobby inside the government coalition, but will mean more severe cuts in civil programmes. France's 1994 defence equipment budget of FF100.4bn (£15.5bn) is already higher than that of other European allies, with an average 0.4 per cent cut in public spending to spend about 30 per cent - and Germany only 27 per cent - of the French level this year, according to French defence officials.

President Mitterrand's two-year old moratorium on French nuclear tests in the south Pacific has provoked strong complaints from within the government majority, but without saving much money because the government has started research into simulation of such tests. The Ellysée yesterday welcomed President Clinton's decision to prolong until autumn 1995 a similar moratorium.

Another general drain on the defence budget has come from France's heavy involvement in United Nations peace-keeping operations in ex-Yugoslavia and elsewhere. Last year this cost France FF7.7bn, of which only FF1.5bn will be reimbursed by the UN.

The German government yesterday approved new guidelines for the armed forces which call for the build-up of rapid-reaction forces under Nato's post-cold war strategy of crisis management. Reuter reports from Bonn.

The guidelines, laid down in a policy document to be published next month, spell out Germany's new international role after unification and detail changes in the military force structure. "This is the first building block of the future Bundeswehr (Federal Armed Forces)," Mr Volker Rühne, defence minister, said. There were instances in international crisis management where "military means are necessary to prevent, limit or end violence," he said.

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Merchant bankers brave disdain of Athens

The Greek socialists know they must pay the price as telecom sell-off brings back the fee seekers, writes Kerin Hope

Undermined by Greece's failure last year to carry out a planned partial flotation of the state telecommunications company, OTE, western investment bankers are pushing back into Athens for another try.

With the socialist government committed to relaunching its conservative predecessor's privatisation programme, to help cover a rapidly widening budget deficit, the sale of 25 per cent of OTE is being set provisionally for October.

However, plans for the flotation are still vague, not least because the socialists, after their election vic-

tory last year, sacked the previous government's two leading advisers on privatisation, N M Rothschild and Credit Suisse First Boston, without appointing a replacement.

Moreover, in the absence of Mr Georgios Genimatas, the economy minister, who is undergoing treatment for cancer, the prime minister, Mr Andreas Papandreu, has not indicated who will be responsible for awarding the mandate for the OTE sale.

It will be a delicate political decision, given the opposition to the sale voiced by OTE's powerful trade union, and a prevailing mood of

hostility towards foreign investment bankers within the ruling Panhellenic Socialist Movement (Pasok). A senior socialist official said: "We're naive perhaps, but we were shocked at the size of the fees the conservatives were prepared to pay to foreign consultants."

Both Rothschilds and CSFB were advising the previous government on its plan to sell a 35 per cent strategic stake in OTE to an international operator.

In addition, CSFB and J Henry Schroder Wagg were appointed global co-ordinators for the flotation

of another 14 per cent of the company on the Athens stock exchange, expected to raise about Dr100bn (£274m). Rothschilds, together with Morgan Stanley and Paribas, were originally appointed joint lead managers of the offering's international tranche. But both the sale and flotation were cancelled when the conservatives lost power in the general election last year.

The socialists' disdain for international advisers extended to firing Arthur Andersen, the accountants, who were preparing OTE's first audit up to international standards. They are to be replaced by audi-

tors from SOL, a quasi-government body of Greek-sworn accountants.

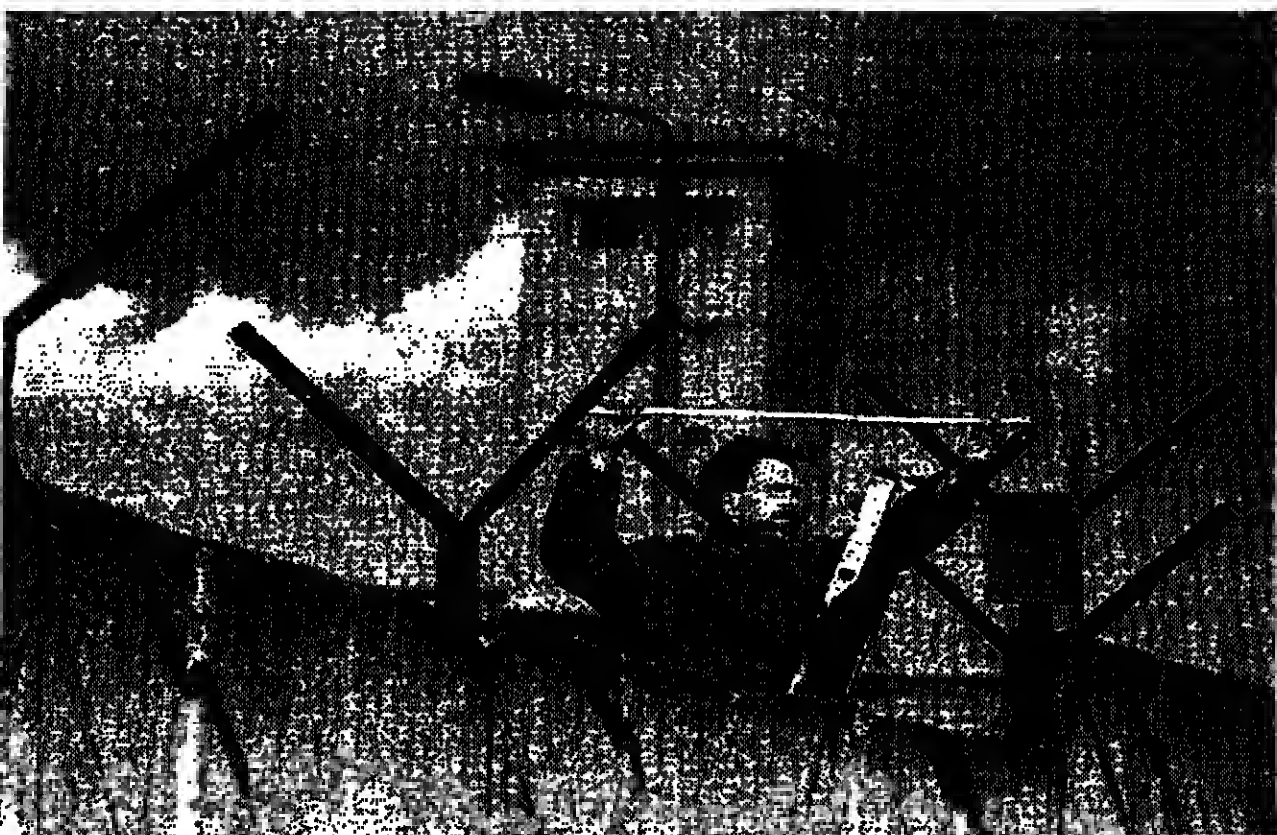
Nevertheless, economy ministry officials now accept the need to appoint an international bank as co-ordinator to ensure the success of what will be the largest local offering to date.

However, the ministry is already admitting that political criteria will affect the final choice. "Obviously, we can't reappoint the old team, even though a few players may be asked to participate again," a government adviser said. Almost all the banks previously

involved have submitted fresh proposals. However, confidence is strong among newcomers, among them Bear Stearns, Lehman Brothers, Barings and Barclays de Zoete Wedd.

The government hopes to realise Dr250bn from the OTE sale, with up to 60 per cent of the issue being placed abroad.

"They appear to be counting on the current appetite for telecoms issues among international investors to offset delays in restructuring old-fashioned management and a lack of transparency in the accounts," said one analyst.



A tradesman working yesterday on part of the Iron Curtain which is being rebuilt as a tourist attraction near the town of Hötensleben, west of Berlin. Most of the barrier was torn down after the Berlin Wall was breached on November 9, 1989.

GERMAN TOWN ANGERED BY NEW IRON CURTAIN

The euphoria in the eastern German town of Hötensleben, some 185km west of Berlin, when the Iron Curtain was dismantled has turned to amazement and anger since their local leaders decided to rebuild part of it as a monument to the cold war.

Eager to halt the decline of Hötensleben since German unification, a small group of civic dignitaries last year began rebuilding a 330-metre (1,080ft) section of the "death strip" which kept east Ger-

mans from escaping to the west. Hoping to slow a sharp rise in unemployment and reverse a demoralising westward migration of many of its 2,000 citizens, they decided to capitalise on the town's isolated location during the cold war with a unique tourist attraction.

"They have spent DM135,000 (£52,500) - some of it government money - to repair and rebuild it, complete with guard towers, spotlights and attack dogs. "It's pure insanity," said Dr Franz

Wehe, a retired surgeon who lives next to the rebuilt wall. "That damn thing was here for 30 years so why do we have to look at it now?" Nearly 500 people in Hötensleben have signed petitions protesting against the monument.

The monument was to have been completed by 1995 but the protests brought a quick halt to federal funding. Annoyed and undaunted, the proponents are seeking DM300,000 in private funding to complete the monument.

Exports boost for engineering sector in Germany

By Christopher Parkes in Frankfurt

Export growth will help Germany's engineering industry increase sales by 2 per cent this year. But a further 100,000 jobs will have to go, and a sustained recovery will not emerge until 1996 and 1997, according to the VDMA industry association.

Stronger growth was not possible

because of weak domestic demand, and the industry's average net return on sales of less than 1 per cent was too low to finance investment, modernisation and new jobs, Mr Jan Kleinewefers, association president, said.

Growing demand from outside Europe for German machines had been apparent for a year, and in the

past two months there had been signs of a change for the better in west European orders, which were no longer slowing, he said.

However, average capacity utilisation was still at a record low of 75.6 per cent at the end of last year. Only four sectors - steel plant, textile, packaging and woodworking machinery - were working at satis-

factory rates of 85 per cent or more. Highlights of last year - the worst since the war, and marked by a 11 per cent slump in industry-wide sales to DM209bn (£31.3bn) - included a 10 per cent increase in sales to the US, Mr Kleinewefers said. The US was now the industry's biggest single foreign market. Exports to China doubled to DM4bn,

helping bolster sales to east Asia by 15 per cent. However, domestic orders fell a real 15 per cent, and a drop of 13 per cent in demand from other European Union countries meant total foreign orders rose only 1 per cent.

Turnover from export deliveries fell a real 7 per cent to DM110bn, but machinery imports also shrank 12

per cent, leaving the sector showing a trading surplus of more than DM550bn. Between the onset of the recession in 1990 and the end of last year, the plant and machinery industries - second only in terms of sales to the automotive sector - had seen output fall by 20 per cent. Some 200,000 jobs had been lost in the west of the country.

Consumers boycott debit cards in protest against surcharge

Portuguese take on banks

By Peter Wise in Lisbon

Portugal's hard-pressed consumers took on the country's big banks yesterday - organising a 24-hour boycott of their widely used direct debit cards in protest at an attempt by the banks to charge a commission on use of the cards.

They were responding to an angry appeal by consumer associations, supermarket chains, petrol stations and other businesses to protest against a decision by banks to charge a commission of 1 per cent on purchases made with the cards.

Shop owners said banks would earn Esc\$bn (£30.7m) to Esc\$10bn a year from the charge, due to be levied from April. They warned they would be forced to pass on the extra cost to consumers because retail profit margins were already low.

The Multibanco card system in Portugal, considered the most advanced in Europe, allows consumers to shop, pay

utility bills, dine out and book train tickets without using cash or cheques. The cost is immediately debited from their bank accounts and paid into the account of the supplier.

The system, run by Socie-

dade Interbancaria de Servicos (SIBS) for almost all Portuguese banks, provides 3,000 automatic teller machines countrywide where cardholders can withdraw and deposit money, consult their accounts, and order cheque books. Retail outlets are equipped with 30,000 electronic points of sale (Epos) integrated into the system.

"We will take the banks to court for operating a cartel," said Mr Jorge Morgado of the Deco consumer association

should seek to regain operational costs through a charge for a service that has been free since it was introduced in 1985. Three years ago British consultants estimated each Multibanco operation cost Esc\$100, considerably less than the cost of processing a cheque.

The decision to levy a charge on card use comes as falling interest rates are sharply reducing earnings from loans and deposits and banks are seeking to improve their balance sheets through commis-

sions and fee-based income. However, the use of cards has allowed banks to reduce staff levels. It has also improved services for customers, who until recently had to wait in long queues for the simplest of banking services.

"We want banks to be flooded with cheques as a result of the boycott to remind them of what a boon the Multibanco system has been to them."

that led the call for a boycott. "They all plan to introduce the same charge at the same time without offering consumers any choice."

Mr Luis Cid, SIBS director, said it was natural that banks

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EUROPEAN NEWS DIGEST

French car sales drive pays off

Government measures to stimulate the French motor industry have prompted a strong response and should result in at least 150,000 extra car orders this year. Mr Gérard Longuet, the industry minister, said yesterday. The measures include a payment from the government of FF15,000 (2572) for car owners who trade in vehicles more than ten years old to buy a new one, helping to prompt 54,000 extra orders in February compared with January, according to Mr Longuet. He forecast continued improvement and estimated that total car sales this year should exceed 1.9m, compared with 1.72m in 1993. The measures, which also include extra tax breaks for company fleets, have been matched by discounts from car producers. French manufacturers have benefited most, with Renault and Peugeot enjoying a stronger increase than the average 35 per cent. Mr Longuet said it was vital to revive car sales, which fell more than 18 per cent last year. Mr Longuet said that it was vital to revive the depressed car sector, which was severely hit by recession last year and contracted by more than 18 per cent. "The automobile sector is one of the principal motors of the economy and represents more than one million jobs," he said. "It is an ideal target to help stimulate consumption." *John Ridding, Paris.*

Hedge fund row 'exaggerated'

The importance of hedge funds to the financial markets has been exaggerated in the recent debate over whether such funds should be regulated, according to Mr Edgar Meister, a member of the Bundesbank board. The main wish of the world's central bankers, including the Bundesbank, was for more transparency to observe more carefully the impact of the growing derivative business on the markets, specifically on market interest rates and on money supply, Mr Meister said. Hedge funds were only one of several powerful forces contributing to turbulence in the bond markets. There were also mutual funds, banks and brokers, Mr Meister said. Private investors should be calmed by the fact that the volatility in the capital markets was only temporary. Germany did not face big credit risks on account of hedge funds because the borrowing activity of such funds was regulated and limited in Germany, unlike in the US, Mr Meister said. *AP-DJ, Frankfurt.*

Mayor may lose immunity



The French National Assembly is to consider a judge's request to strip Lyons Mayor Michel Noir (left) of his parliamentary immunity for suspected embezzlement. The request from Judge Philippe Courroye was a further blow to the mayor of France's second city, once regarded as a possible presidential contender. Mr Courroye said he wanted to place Mr Noir under judicial control while he investigates suspicions the mayor used up to FF7m (200,000) in city funds for his own election campaign. *Reuters, Paris.*

Krona to keep on floating

The Swedish krona is likely to float for an extended period and remain outside the European Union's Exchange Rate Mechanism, Mr Thomas Franzen, deputy governor of Sweden's central bank, said yesterday. "The lesson we have learned from developments in recent years is that we must first get the (Swedish) economy in order," he told a seminar in Stockholm. He predicted that European interest rates would continue to decline. "Monetary policy is unchanged in Europe despite the recent turbulence (in markets), which means continued successive interest rate cuts." *AP-DJ, Frankfurt.*

Museum fee 'discriminatory'

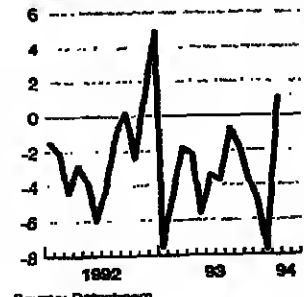
Spain should stop letting its citizens visit its museums free of charge because the practice of only charging tourists is discriminatory, the European Court of Justice ruled yesterday. Spaniards, foreigners living in Spain and holidaymakers under 21 can visit any state museum free of charge, but foreign tourists over 21 have to pay. The European Commission took the Spanish government to court arguing it was breaking European law by discriminating against people on the grounds of nationality. Charging foreigners effectively restricted their freedom of movement since museums were "one of the determining reasons" tourists were attracted to a country, the Commission said. Spain said it believed its open doors policy was not discriminatory since it included some nationals from other EU states. *Reuters, Luxembourg.*

ECONOMIC WATCH

German retail sales edge up

Western Germany

Retail sales volume
Annual % change



Source: Destatis

around the turn of the year, the economics ministry said. The ministry cited growing foreign demand, "lively" housebuilding and "further clear progress" in eastern Germany's recovery as factors underlying this resurgence. ■ Russia's industrial output rose 2.3 per cent in February from January, but was 24.1 per cent below the level of a year earlier, the sharpest drop since start of reforms in 1992. Some 4,380 enterprises shut down some or all production last month. ■ Spanish industrial producer prices rose 1.1 per cent in January, compared with a 0.2 per cent rise in December and 0.8 per cent in January 1993. The monthly increase brings the rate for the year to 3.6 per cent in January.

Çiller to pay at polls for cash crisis

John Murray Brown on the Turkish government's first political test after presiding over a sharp fall in the lira and a liquidity squeeze

Turkey's prime minister, Mrs Tansu Çiller must have told them their cheque was in the post. That at least is how one observer explains the gloomy faces of Turkish motorway contractors when they left a meeting with the prime minister still owed seven months in payments.

After less than a year in office, Mrs Çiller's conservative-led coalition is facing a desperate search for cash to meet its ongoing expenses.

It is a problem that will almost certainly affect the performance of Mrs Çiller's Truth Path party (DYP) in municipal elections across the country on March 27.

Turkey is in the middle of the most damaging financial crisis since the banking collapse of the early 1980s. After a decade of capital market reform, recent currency turbulence has underlined just how vulnerable the economy is to policy error.

With interest rates on government paper having risen to 125 per cent and the international bond markets for developing country debt suffering the jitters in the wake of the rise in US rates, Turkey is finding it increasingly costly to borrow. Privatisation receipts have not been as large as projected. Meanwhile, most of the tax changes recently introduced will not have an impact on revenues until 1995.

The government's problems deepened last week when it was forced to "pull" its \$750m global bond issue. There are civil servants and public works contractors to pay, farm prices to subsidise, and debts to service, and bankers are worried a big liquidity crunch is on the way.

The road builders are just the latest creditors to come knocking on the government's door. The contractors had to settle for a package of tax relief and three-year bonds in lieu of the \$700m owed for work completed. The work programme for 1994 has been sharply curtailed.

The government's response to the crisis and the run on the lira has been far from convincing. Sir Leon Brittan, the European trade commissioner, during a visit to Ankara last month, urged the Turkish authorities to introduce austerity measures to underpin the gains from the 12 per cent

local and international confidence in Mrs Çiller's leadership. The bold rhetoric that accompanied her appointment has never been matched by the reality of her policies. Her reformist instincts have been frequently blocked by opposition from her coalition partners, the Social Democratic Populists.

"Everyone has lost out," said one disillusioned Turkish businessman. "The central bank's reputation has been damaged, so has the Treasury's. Reserves are depleted. And the small investor has got badly burnt."

Polls suggest that in the municipal elections on March

The currency turbulence has underlined just how vulnerable the economy is to policy error

devaluation in January.

Instead Mrs Çiller set alarm bells ringing by suggesting Treasury bill liabilities should be converted into new five-year paper, in effect a domestic rescheduling.

What was puzzling was the Treasury's announcement that it is to issue convertible bonds in the state telecom company, even though the telecom company is still not privatised and all moves to prepare it for sale remain blocked by the courts. There were even press reports, quoting government officials, that undercover agents had been ordered to infiltrate the money markets in the belief that it was Kurdish separatists who were trying to destabilise them.

The crisis reflects the loss of

27 Mrs Çiller's DYP will limp in a poor fourth behind the Motherland party Anap, the main opposition party, the Social Democratic Populists, and the Islamic based Refah RP.

The election is the first real test of Mrs Çiller's popularity since she was voted party leader by the DYP congress last June.

A professional economist and a political outsider, Mrs Çiller seemed to offer the best hope of restoring the country's fortunes and forging its western identity. Today if Mrs Çiller survives the current turmoil, it will probably be less the result of any real political achievement than the fact that the DYP is unable to find a credible alternative leader.

Her policies, centred on finding ways to finance the budget rather than addressing the need to bring the deficit to heel, are attacked by leading economists. Her attempts at more structural changes, such as pushing through large-scale privatisation, tax reforms and curbing civil service pay rises, have been limited because of divisions in her coalition and have done little to ease budget pressures.

Also criticised has been her management style on which the resignations of two successive central bank governors have been blamed. What was seen as her mishandling of the 12 per cent devaluation in January badly dented the bank's prestige. Moreover central bank reserves have fallen by as much as \$3bn since the beginning of the year to about \$4.5bn early this month.

Some bankers say Mrs Çiller has in large part brought the troubles on herself. The local bond market has all but dried up as a direct result of her unorthodox and ultimately failed attempt to push down domestic bill rates. The current uncertainty has pushed rates on government paper up 30 points since the second half of 1993. Even at 125 per cent for one-year paper, there are few buyers. As one banker put it: "It's no longer enough to have an interest rate policy. Something more is needed."

After 7 per cent growth in 1993, forecasts for this year are being marked down. One western economist says Turkey could see negative growth in 1994, making it even more difficult for business to rebuild. In such a climate, said one economist, bankruptcies would be unavoidable, particularly



Çiller: once seemed to offer the best hope of restoring the country's fortunes and forging its western identity

for those dependent on government payments, such as contractors. Banks too, will feel the pinch, caught out with large foreign exchange exposure at a time when the lira's depreciation is accelerating.

Today Turkey displays all the symptoms of an economy where inflation is heading out of control. No one wants to hold lira. On pay day, Turkish civil servants rush to the exchange shops. Even divorces are sometimes settled in hard currency. Some foreign banks worry the lira could fall even more sharply unless a serious structural reform programme is introduced. Few Turkish observers hold out much hope of that in the current political uncertainty.

Journalists strike in pensions protest

By Robert Graham in Rome

Italian journalists yesterday began a four-day strike in protest over plans by the Ciampi government to place some of the surplus in the journalists' pension fund in the main state-operated pensions scheme.

The strike provoked dismay among political parties who have been relying on the media for coverage in the final 11 days of the general election campaign.

The stoppage will affect all newspapers today and Thursday, and television and radio on the following two days.

The stoppage is the result of a long-running battle between the journalists union and the government over the pension fund. As part of an effort to boost the fast depleting coffers of the state-operated pension scheme, the Ciampi government decided last year to raid the surpluses of separately operated, but state-run entities, controlling the pensions of the various professions.

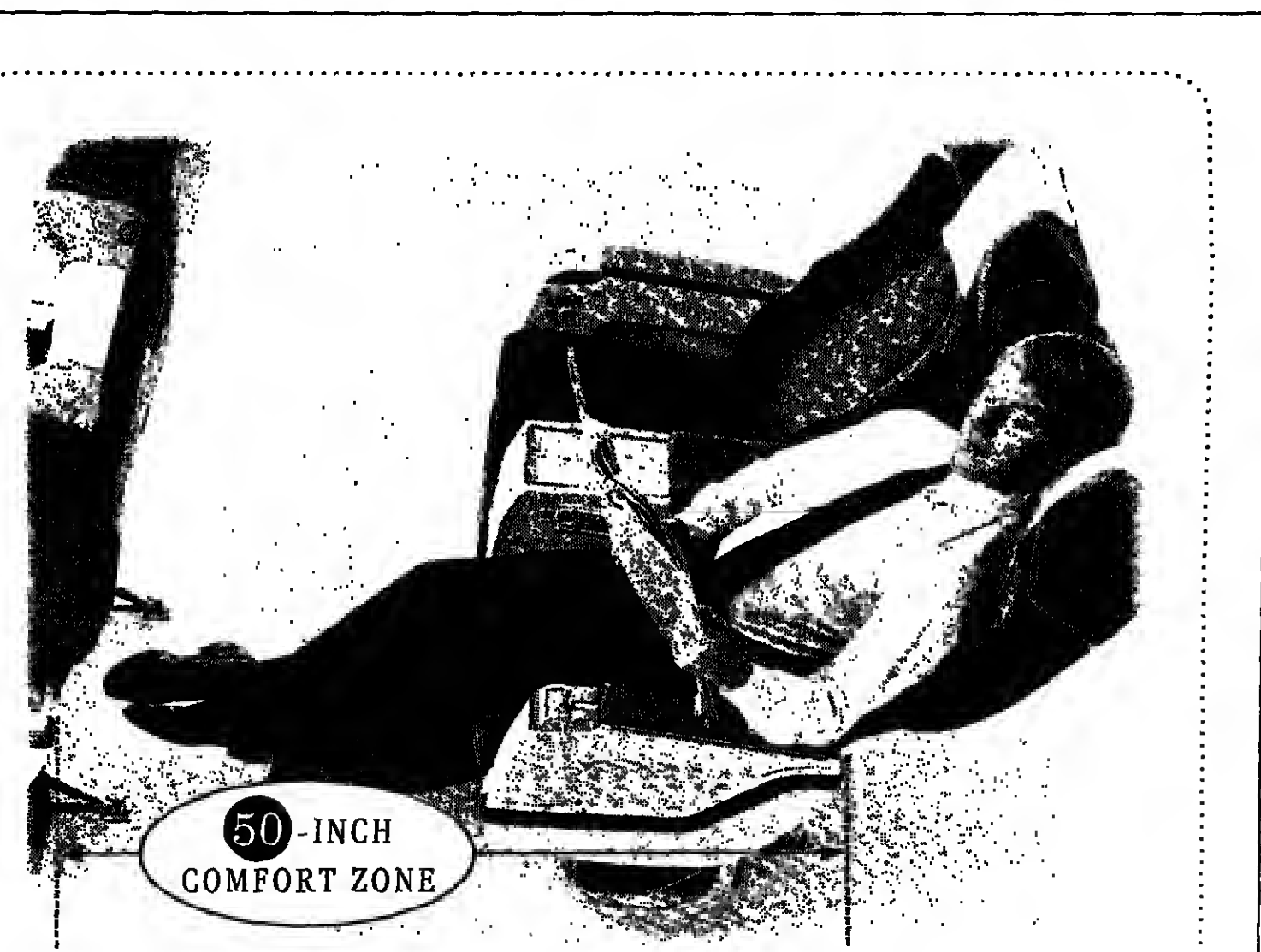
The strike comes as Italian journalists have for the first time come under investigation for corruption. Three prominent economic writers are being investigated by Milan magistrates for allegedly receiving money from the Ferruzzi-Montedison group.

The investigations follow revelations by Mr Carlo Sama, the former managing director of Ferruzzi-Montedison who has admitted large-scale illicit funding of political parties.

Mr Sama said he had submitted to Milan magistrates the names of several journalists who had been paid sums of money to help improve Ferruzzi-Montedison's image.

The journalists deny the allegations. They are Mr Giuseppe Turani, of La Repubblica, Mr Osvaldo De Paolini, former City editor of the business daily Sole-24 Ore, and Mr Ugo Bertone of La Stampa.

Italian journalism has claimed much credit for exposing the corrupt links between business and politics.



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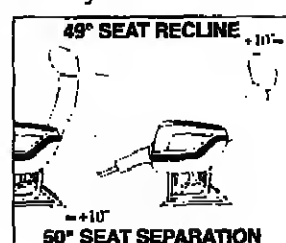
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Notice is hereby given that with respect to the issuance of new shares for a Stock Split authorized at the meeting of the Board of Directors of the Company held on 28th February, 1994, the shareholders on the closing register as at 31st March (Thursday), 1994 (Japan time) (the record date) will be allocated two (2) new shares for each ten (10) shares owned, and as a result of such Stock Split the following adjustment of the Conversion Price for the Bonds shall be made pursuant to Condition 4 (C) of the Terms and Conditions of the Bonds:

- 1) Conversion Price before adjustment: Yen 8,713.00 per share
- 2) Conversion Price after adjustment: Yen 7,269.80 per share
- 3) Effective Date of the adjustment: 1st April, 1994 (Japan time)

Yen 8,713.00 per share
Yen 7,269.80 per share
1st April, 1994 (Japan time)

CAPCOM CO., LTD.
Osaka, Japan

16th March, 1994

years.

Settlers ready to be martyrs or heroes

Hebron Jews could spark war, writes Julian Ozzanne

A photograph of Rabbi Meir Kehane, the slain Jewish rabbi who advocated religiously sanctified Jewish violence against Arabs, is proudly displayed in the bedroom of a 13-year-old boy in Hebron, the city that has become a flashpoint of Israeli-Palestinian violence.

"I don't agree with Kehane but when a boy grows up and his father is murdered by Arabs, you must understand why he might see Kehane as a hero," says the boy's mother, Mrs Ruth Hizmy.

Rising Jewish settler militancy has become the greatest political threat to the government of Mr Yitzhak Rabin and the Israeli-Palestinian peace process. At the least, the settlers promise a nationwide campaign of civil disobedience to resist evacuation from Palestinian areas. At worst, rising emotions, fears and Jewish religious fundamentalism could explode into a Jewish-Arab civil war and even Jewish-on-Jewish violence.

The 40 Jewish families settled in Hebron are in the vanguard of Jewish militancy. Hebron is the breeding ground of the two Jewish terrorist groups, Kach and Kahane Lives, banned by the government this week.

The Hebron massacre has worsened the settlers' tendency to be an insular community sustained by the belief

Mrs Shani Horowitz, originally from New York, moved to Hebron because she wanted to live somewhere "where by just sitting I was doing something for the Jewish people."

In a passionate and often angry tone, she says the Hebron settlers are like the early Jewish pioneers who built the state of Israel through settlement. "Hebron is spiritually and geographically the centre of Jewish life. Because we live here, Jews can come and visit the sites and holy places. We are the messengers. We are sitting here for the rest of the country."

"Evacuating Hebron is like evacuating the Walling Wall. Hebron is the second most important Jewish city after Jerusalem. We are very much on the front line, on a mission as soldiers. We are holding on tight to the land of Israel. We are redeeming this place from the hands of Jews."

The government's timid moves against the settlers has exposed the weakness of Mr Rabin's political will. He fears that acting against the Hebron settlers will fuel right-wing opposition to the peace process and force the government into surrendering a powerful pawn in the drawn-out negotiation with the Palestinians.

But the government's refusal clearly to state the long-term line of its withdrawal from occupied Arab land has bound all 125,000 settlers together in a common cause with the Hebron settlers. The belief is that any move against Hebron is the thin edge of the wedge. Most of the cabinet realise that Hebron and some other settlements will have to be evacuated sooner or later; the more the government delays, the more strongly organised the settlers become.

Yesterday, hours before an anti-government demonstration, the Yesha council of Jewish settlements said: "It is inconceivable that a Jewish government could make Hebron Judenrein (clean of Jews). The Rabin government has no mandate for an 'ethnic cleansing' of Hebron or to carry out its policies of capitulation [to the PLO]."

The settlers are preparing a campaign of fierce civil disobedience against any effort to evacuate them. They have urged the army to disobey orders, and implicitly threaten violence. "If the government tries to evacuate Hebron it will be a declaration of war against the Jewish people," said Mr Noam Arnon, a Hebron settler. "We are not going to move. We are not going to leave. They will have to kill us."

Mr Arnon says settler leaders are calling for non-violence because they know that violence damages their cause. But he warns that if the army leaves, Hebron settlers will take up arms against the Arabs in a civil war. Jewish law has a strong prohibition against Jewish-on-Jewish violence, but Mr Arnon says that if the army tried to evacuate Hebron by force, "with deep emotional and religious feeling, people might lose self-control. Then, horrible, terrible things might happen."

With up to 15,000 army-issued automatic weapons in the settlers' hands, ten of thousands of licensed handguns and the possibility of secret arms caches, these are threats the government cannot take lightly. But the more the government delays a political decision on settlements, the more the settlers threaten the fragile peace process, and the stability of the government itself.



Rabbi Moshe Lavinger, founding father of the Jewish settlement movement in the occupied lands, sits facing a charge of ignoring army orders in Jerusalem yesterday

they are on a mission from God to maintain a Jewish presence amid the 120,000 Arabs who live in Hebron, burial place of the biblical patriarchs Abraham and Jacob, and an area sacred to both Moslems and Jews.

They refuse to see Hebron as occupied. For them it is an intrinsic part of the land of Israel promised to the Jews by God. Part of their cultism is reflected in their deep belief they are being victimised, not only by the Arabs but by their "treacherous" Jewish government. They believe all outsiders do not understand them and are part of a conspiracy to defeat their religious goals.

Like all messianic cults, they have martyrs and heroes and a powerful faith in the sanctity of dying for one's beliefs. They strongly believe in expanding their numbers by breeding; the average family has six children, and talking to the children is like talking to the brautawashed.

Mahathir likely to gain control of Sabah assembly

By Kieran Cooke in Kota Kinabalu, East Malaysia

The national front coalition government in Malaysia led by Prime Minister Mahathir Mohamad appears likely to assume power in the state of Sabah, East Malaysia, after several members of the dominant local political party voiced support for Dr Mahathir.

Sabah is one of only two states in the Malaysian federation not controlled by parties in Dr Mahathir's national front. In bitterly fought state elections last month the locally constituted Parti Bersatu Sabah (PBS), led by Mr Joseph Pairin Kitingan, the chief minister, narrowly defeated the

national front and retained its control of the Sabah assembly.

But in recent days PBS's majority has been threatened by a number of defections by its assembly members to the national front. Yesterday Mr Jeffrey Kitingan, a younger brother of the chief minister who was elected as a PBS assemblyman in last month's elections, announced he was forming a political party which would join Dr Mahathir's national front coalition.

Mr Jeffrey Kitingan, who was recently released after being detained for three years on suspicion of wanting to take Sabah out of the Malaysian federation, has said that Sabah could progress and develop

through membership of the national front.

Dr Mahathir has made no secret of his antagonism to the PBS and to Mr Pairin Kitingan in particular. The PBS accuses Dr Mahathir of withholding federal funding for Sabah's development and says the national front has paid millions of dollars to win support of PBS assembly members.

The national front now seems certain to command a majority in the state assembly, which is due to hold its first meeting on Friday since the recent election. Earlier this week Mr Pairin Kitingan asked the Sabah governor to dissolve the assembly and for new elections to be held.



Members of the Boerekommando, an extreme right-wing organisation, preparing sandbags as they build defences at the Wonderboom fort, north of Pretoria yesterday. About 30 of the right-wingers occupied the fort that overlooks the South African administrative capital and have vowed to fight to keep it.

Strike hits S Africa gold mine for second day

By Matthew Curtin in Johannesburg

A strike over free political activity halted underground work at the Kloof mine, one of South Africa's most profitable gold producers, for the second day running yesterday. Kloof is responsible

for about 5 per cent of the country's gold output of 620 tonnes a year.

The strike, by 11,000 of the mine's 16,000 workforce, is the biggest in the sector since 1991. It comes in the middle of a campaign by the National Union of Mineworkers to win concessions from

Gold Fields, Kloof's parent company.

An NUM official said workers had given a list of grievances, including an alleged ban on political activity on mine property. The union had not received a response and this had led to the strike. A Gold Fields official said

the management had responded.

Gold Fields has before now declined to take part in the industry's wage bargaining forum, unlike the rival mining houses Anglo American, Gencor, Johannesburg Consolidated Investment and Randgold.

IAEA 'was blocked in N Korea'

The International Atomic Energy Agency (IAEA) team inspecting nuclear facilities in North Korea has been obstructed in its work, the organisation said yesterday. Patrick Blum reports from Vienna.

"Restrictions were applied, stopping us making some tests," the IAEA said. The team, which spent 15 days in North Korea was able to visit all seven declared nuclear facilities as agreed with Pyongyang last month. One of the plants where the experts faced curbs was at the main nuclear complex at Yongbyon, north of the capital. The team will report back this morning. A formal IAEA board meeting could be called next week.

CFA zone plea

Leaders of seven former French West African colonies gathered yesterday to lobby for more foreign help to cope with a 50 per cent devaluation of their common currency, the CFA franc. Reuters reports from Ouagadougou.

International Monetary Fund officials were present to hear the plea. The IMF is rushing through soft-loan agreements to help CFA countries get relief from international creditors.

Death for fraud

The mastermind of one of China's largest fraud schemes has been sentenced to death and a former vice-minister jailed for 20 years for corruption in the case, it was revealed yesterday. Reuters reports from Beijing.

Shen Taifu was sentenced on March 4 for organising the Great Wall Machinery and Electronics Group, a pyramid-style scam that sucked up Yuan 1bn (\$14m) from unsuspecting small investors.

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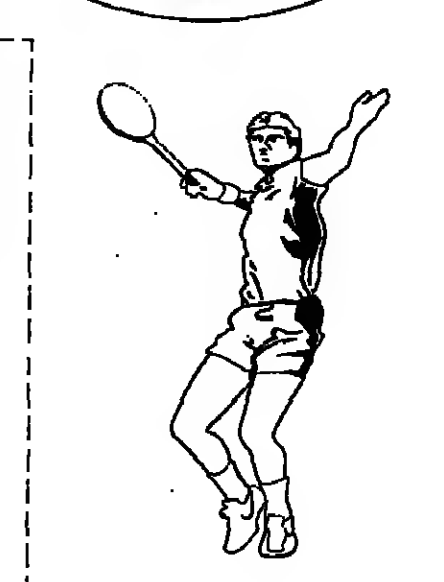
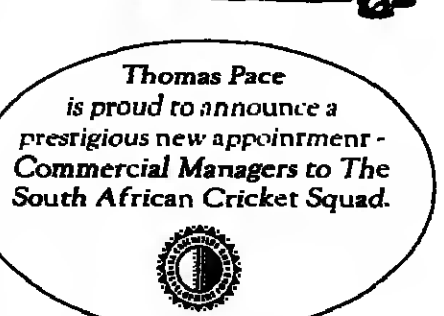
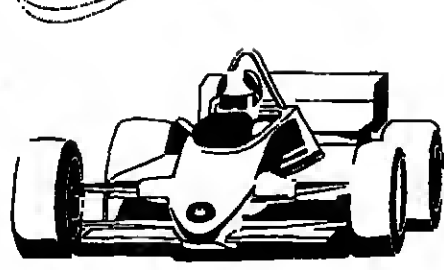
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NEWS: WORLD TRADE

Gatt members warm to China's entry

By Frances Williams in Geneva

Members of the General Agreement on Tariffs and Trade, with the notable exception of the US, yesterday expressed strong support for an early resumption of China's Gatt membership and welcomed recent moves to liberalise trade and relax foreign exchange controls.

However, the row between the US and China over human

rights, which could lead to non-renewal of China's most-favoured-nation trading status in the US market, is proving a big stumbling block to faster progress in the negotiations on Gatt entry terms.

China is anxious to rejoin Gatt by the end of this year, so that it can become a founder member of the World Trade Organisation which succeeds Gatt in 1995.

Entry negotiations resumed

yesterday after a six-month gap, allowing Chinese officials to present details of Beijing's latest foreign exchange and trade reforms. These included the unification of exchange rates and a managed float of the Chinese currency since January this year, with a pledge of full convertibility by the year 2000, as well as tax reform and reductions in a wide range of tariff and non-tariff barriers.

The response yesterday was generally favourable. The European Union said the reforms appeared to be going in the right direction, and it and Japan expressed hopes for an acceleration of the negotiations. However, the US said it was not prepared to subscribe to "an artificial deadline" for Chinese membership.

At the same time, western nations are united in pressing China to pay a still higher Gatt

entry fee, including lower barriers to trade in industrial goods and agriculture, improved market access for foreign services companies such as banks, and better protection of intellectual property rights. Gatt members are also seeking further moves by Beijing to cut state intervention in the economy and ensure trade rules are applied consistently across the country.

China was an original member of Gatt but pulled out in 1950 after the Communists came to power. The Beijing government applied to re-enter Gatt in 1986 and has taken a full part in the Uruguay Round of global trade talks. However, progress in the membership talks, which began in 1987, has been slowed by human rights concerns as well as the difficulty of getting to grips with China's rapidly-evolving trade regime.

Beijing and the business of human rights
Nancy Dunne on US company fears of losing their fastest growing market

When Mr Warren Christopher, the US secretary of state, confronted Chinese officials in Beijing at the weekend on the vexed issue of human rights and trading rights, it was the American who blinked first.

Since last June the administration of President Bill Clinton has vowed to annul China's Most Favoured Nation trade status unless it improved its human rights record. However, in spite of compromising noises made by Mr Christopher as he left Beijing on Monday, China has not only failed to make any "significant" progress to which the secretary of state could point, it has yet even to offer political cover for what appears to be a US retreat.

China has had dangled before it the possibility of permanent MFN status but has remained insistent that the human rights of its citizens is its own business. Its officials are of the view that the US needs China as much as China needs the US. They might be right.

US companies have committed or invested \$10bn (\$5.8bn) in China. It is their fastest growing export market, according to Ms Pam Baldinger, communications director of the Business Coalition for US-China trade. The group of 1,000 companies warns that loss of China's MFN status, and subsequent reprisals, would put all the investment at risk.

American exports to China soared by 19 per cent in 1993

and 17 per cent last year. Most of the market is in sophisticated technology, capital equipment and aerospace, industries which provide the high wage jobs Mr Clinton has promised to increase.

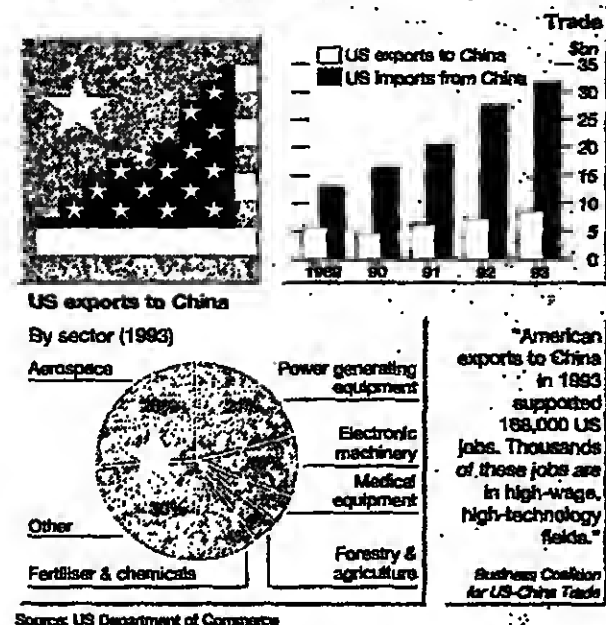
More than anything, it is China's potential that draws hungry companies in droves. According to the Business Coalition, the potential market looks like this: \$40bn over the next 20 years for aerospace; \$30bn over the next seven years for power generation equipment; \$25bn over five years for telecommunications; \$18.2bn over three years for oil-field and gas machinery and \$4.3bn over the next eight years for computers.

Withdrawal of MFN would make a gift of these markets to European and Japanese competitors. It would also cost US consumers an estimated \$16bn they save buying cheap Chinese goods.

"Loss of MFN would poison the trade environment," said Mr Bill Lane of Caterpillar, which had a 20 per cent surge in sales of construction and mining equipment to China last year. With Japanese suppliers still in the lead, "it's critical that MFN be renewed," he said.

American Telephone and Telegraph has been making deep inroads in China. Mr Randolph Lumb, government relations vice president for AT&T, said the company can generate \$5-\$8 through trade with its China subsidiaries for every \$1 invested there.

The US view of China trade



In Guangdong province, the company has beaten formidable competition from entrenched companies such as Alcatel, the French telecoms equipment maker, and Ericsson, the Swedish group, to win big switching and transmission contracts. Its joint venture in Shanghai is the leading supplier of telecom transmission equipment in the country.

Sales of switching and transmission systems are rising. AT&T Network Systems has fibre optic and transmission joint ventures in China with

switching and microelectronic ventures under negotiation. AT&T Bell Laboratories is working with the Chinese government to set up a research and development operation in the country.

China also offers hope for the US commercial aircraft sector, which has been hit hard by competition from the European Airbus consortium and by recession abroad. McDonnell Douglas has been in China since 1975 selling aircraft and foreign US textile supplier, but higher tariffs would cut into its



Christopher: unrequited compromising noises

project off the ground," said Mr Mark Schlansky, a McDonnell Douglas spokesman. "It required a great deal of patience. Trust had to be built on both sides. Progress had to be incremental. Now we've learned their values, and they've learned ours."

One sector - textiles and apparel - projects gains if China was to lose its MFN status. The American Textiles Manufacturers Institute says China has become the largest foreign US textile supplier, but higher tariffs would cut into its

exports. It was unlikely that China's quota share would be redistributed, the association said. The gain would be for US companies.

Most exporters anonymously fault the Clinton administration for taking seriously the president's rhetoric on China during his election campaign. Like Mr Cal Cohen of the Emergency Committee for American Trade, they argue that the development of China's market economy promotes human rights more than any other measure.

Companies complain that the administration has sent mixed signals. The commerce department put China on top of its Big Emerging Markets list, a strategy for pushing exports in 10 regions outside the European Union and Japan. At the same time the president and the state department were issuing threats.

Exporters are weary of the annual MFN renewal exercise. They hope that, given any reasonable progress, the administration will give China a multiple year renewal or look elsewhere for a less ruinous issue with which to put pressure on Beijing.

On Capitol Hill, where the Democrats used to assail President George Bush regularly for not promoting human rights, sentiment has begun to shift towards renewing MFN. "There are too many jobs at stake," said a long-time congressional aide. "The momentum now has gone the other way."

TRADE NEWS DIGEST

GEC resolves S Korea rail row

GEC-Alsthom said yesterday that it had resolved a dispute among its South Korean subcontractors that threatened to derail a \$2.4bn (£1.6bn) contract to supply the train à grande vitesse (TGV) for the country's new high-speed rail system.

The row erupted last November when GEC-Alsthom selected Hyundai Precision and Industry instead of Daewoo Heavy Industries to head a consortium to build the TGV under licence in South Korea.

Daewoo protested, calling the decision unfair. It said it had been GEC-Alsthom's main partner when the Anglo-French group bid for the high-speed train contract against Siemens of Germany and Mitsubishi of Japan. GEC-Alsthom said Hyundai was selected as the consortium leader on the basis of its industrial and technical capability.

Daewoo, expressing fears that it would not have access to technology transfers if it remained a junior partner in the consortium, filed a suit to block talks between GEC-Alsthom and the South Korean government on a final contract.

Following the dismissal of the suit last month by a South Korean court, Daewoo has now agreed to join the TGV consortium with the guarantee that it will have full access to technology transfers, GEC-Alsthom said.

Thirty-four of the 46 TGVs ordered will be built in South Korea. Hyundai and Daewoo will have an equal share in the production of the engines, while Hanjin Heavy Industries will be responsible for the carriages. *John Burton, Seoul.*

Qantas plans China service

Qantas, the large Australian airline in which British Airways holds a minority stake, has said that it wants to re-start a service to China on June 1 - a move which could sound the death knell for the fledgling Australian carrier Australia Air International. AA secured rights to China last year from the International Air Services Commission, which allocates Australia's international routes.

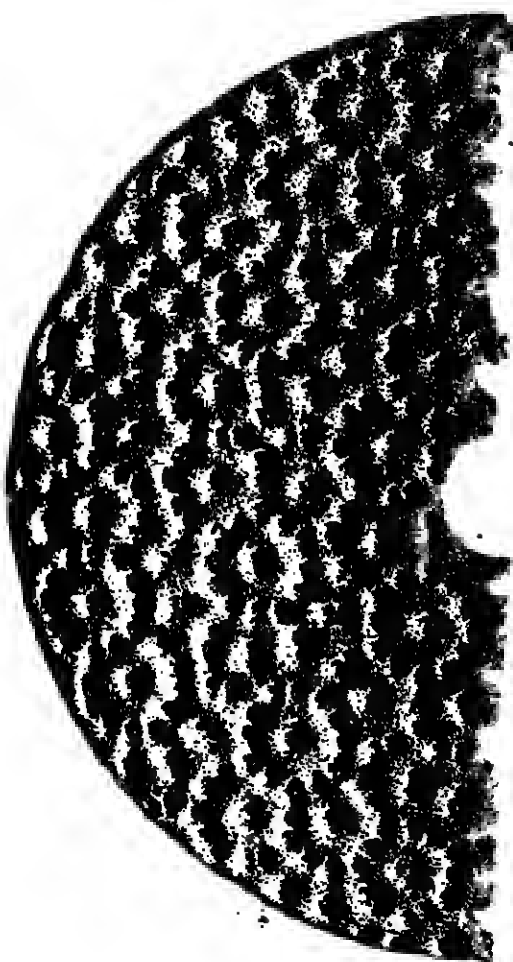
At that stage, Qantas, which ceased operations to China in 1987, did not make an application. AA had hoped to start operating in 1993, and even published proposed schedules but the carrier subsequently failed to meet IASC financial requirements. Qantas plans a once-a-week flight to Beijing via Guangzhou, using a Boeing 767 aircraft. *Nikki Tait, Sydney.*

Swiss diesel deal for VM

VM, the Italian diesel engine manufacturer, has won a contract worth more than £200m (\$250m) to supply six-cylinder engines for the Swiss army's new Duro troop transporter. The contract is with Buecher Gwyer of Niederweningen, which will produce 2,000 vehicles over the next four years. VM, which is based near Bologna and supplies Alfa Romeo, Ford and Rover, is to provide the Ecosystem Power (EP) 638 L engine which has a maximum speed of 100km per hour and meets European Union emission standards due to come into force at the end of 1995. *John Simkins, Milan.*

John Brown wins US contracts

John Brown, part of Trafalgar House of the UK, yesterday announced two big US contracts totalling \$70m (£47m), both awarded by European chemicals companies. The larger deal, worth \$40m, is to design and construct a specialty chemicals plant in Theodore, Alabama for Huls, the German chemical company. John Brown has also won a \$30m contract to provide engineering and procurement services for Solway Polymers' polyethylene finishing complex at Deer Park, Texas. *Andrew Baxter.*



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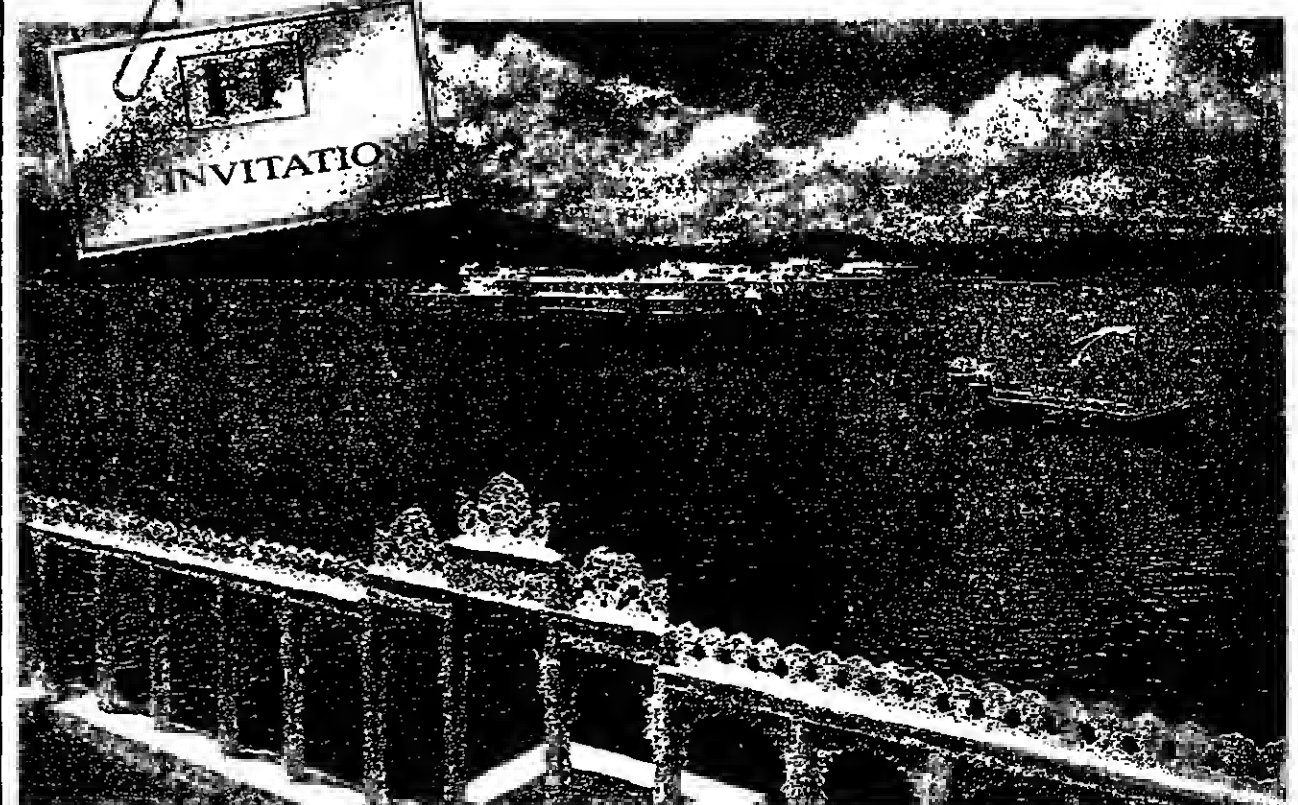
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Fly on to Jodhpur and the Meherangarh Fort, tour the surrounding countryside and sample village life. Relax in Udaipur by Lake Pichola. Enjoy a beautiful woodland journey to the Chaumukha Temple. Return to Delhi for that last minute shopping and flight to London, with your mind full of the wonders of India.

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London hands car pricing case over to Brussels

By John Griffiths

The UK government yesterday effectively handed over to Brussels responsibility for implementing the Monopolies and Mergers Commission recommendations for increasing competition in car sales.

In doing so it has acknowledged its failure to make carmakers fall into line with the watchdog's findings and at the same time angered consumer groups which claim that car prices are excessively high in

Britain compared with the rest of Europe.

Motorists and other parties must now wait to see what conclusions the Commission reaches in its current review of "block exemption," the selective distribution system which allows carmakers to sell through exclusive networks.

It is this system, requiring an exemption from normal EU competition rules, which consumer groups blame for allegedly making UK car prices higher than in many other

parts of Europe - and on which much of the MMC's own case rests.

The exemption, granted in 1985, runs out on June 30 next year. The motor industry has already been warned by the EC competition directorate that renewal will depend largely on manufacturers' adherence to EU limits on car price differentials across Europe and other signs that consumers are not being disadvantaged.

It is clearly the hope of the UK government that the MMC's con-

cerns will be adequately addressed by the Commission, and that no further action will be needed by Westminster.

The MMC's report on car distribution and sales, published almost exactly two years ago, found that a complex monopoly existed in favour of 24 car suppliers arising out of the exclusive distribution system.

The MMC identified a number of restrictions imposed by suppliers in agreements with dealers as operating against the public interest.

It also found that a scale monopoly existed in favour of Ford, as the UK market leader together with its wholly-owned subsidiary, Jaguar, but did not find that this scale monopoly operated against the public interest.

Ford and other makers have dug in their heels against the recommendations, insisting that they are too prejudicial to their interests.

Consumer groups have been consistently critical of both manufactur-

ers and dealers, claiming that mediocre service and repair performance undermines the whole concept on which block exemption itself had been based - namely that cars are so complex, and have such big safety implications, that a dedicated, exclusive sales and after-sales network is warranted.

Consumer groups want a market free-for-all, with manufacturers obliged to supply cars to virtually any outlet which wishes to sell them.

PM firm on fight against terrorism

By David Owen and Michael Cassell

The IRA cannot bomb its way to the negotiating table, Mr John Major told MPs yesterday, as the government stepped up efforts to co-ordinate a convincing response to the latest wave of terrorist outrages in a series of behind-closed-doors meetings.

A 50-minute meeting yesterday morning between the prime minister and Mr James Molyneux focused on the political talks process and security, with the Ulster Unionist party leader calling for pressure to be put on Dublin to crack down on terrorism.

The UUP leader later released a toughly-worded statement describing Dublin's "updated" arrangements for dealing with terrorists as "seriously flawed" and the lack of results as "quite scandalous".

He dealt a blow to the government's hopes of pressing ahead with the three-stranded political talks process, saying that institutionalised structures for dealing with north-south relations - such as those advocated by nationalists - would not serve any practical purpose and "merely create suspicion".

Pressure for the government to ensure that a tougher line is taken against terrorism will increase tomorrow when the Tory backbench Northern Ireland committee holds its next meeting.

Meanwhile, Downing Street hinted that moves might be put in train to stage another meeting between the prime minister and Mr Albert Reynolds, his Irish counterpart, before their next scheduled get-together in June. One informed source said he was certain the two men would meet before June.

It was announced yesterday that Mr Molyneux will in April lead a four-man delegation to the United States to meet senior politicians and White House and state department officials.

Rail companies face £500m bill on rolling stock

By Charles Batchelor, Transport Correspondent

Rail companies which take over British Rail's passenger operations can expect to pay about £500m in charges to lease the trains and carriages they will need.

This sum is in addition to the £2.2bn which the government announced last month they will pay for the right to run their trains on the national rail network.

The government's programme to privatise BR envisages the creation of three rolling stock leasing companies which will take over BR's existing trains and carriages and also buy new ones for leasing on to the train operators. The operating companies will not be required to lease their rolling stock but most are expected to do so.

Details of the leasing arrangements have been eagerly awaited by potential bidders for BR franchises which are expected to go on sale next year.

Negotiations between the department of transport, the Treasury, BR and Hambros, the merchant bank which is advising on the rolling stock companies, are still continuing. The government is keen to establish a commercial regime for pricing the leasing deals but this is proving difficult in the absence of an existing market for rolling stock leases.

The £500m leasing charge will in theory not prove a burden to the companies which take on rail franchises because it will be matched by an increase in the Treasury subsidy. Any increase in the subsidy requirement could however demotivate managers, some of whom have already expressed concerns at the amount of track charges they will have to pay.

Potential bidders for rail franchises are concerned that very few details have been released about the rolling stock companies less than three weeks ahead of the formal creation of a devolved railway network on April 1.

The government plans to establish three rolling stock companies which will each take over a mix of BR existing rolling stock. Two of the rolling stock companies will be based in London, with a third in Sheffield.

The department of transport expects to reach an agreement on the leases by June and to have concluded agreements with the present BR operating companies by September or October. No detailed agreement has yet been reached on how the leasing charges would be allocated to the 24 BR operating companies which are to be franchised. They are unlikely to mirror the allocation of track charges however, because they will depend on type rolling stock.

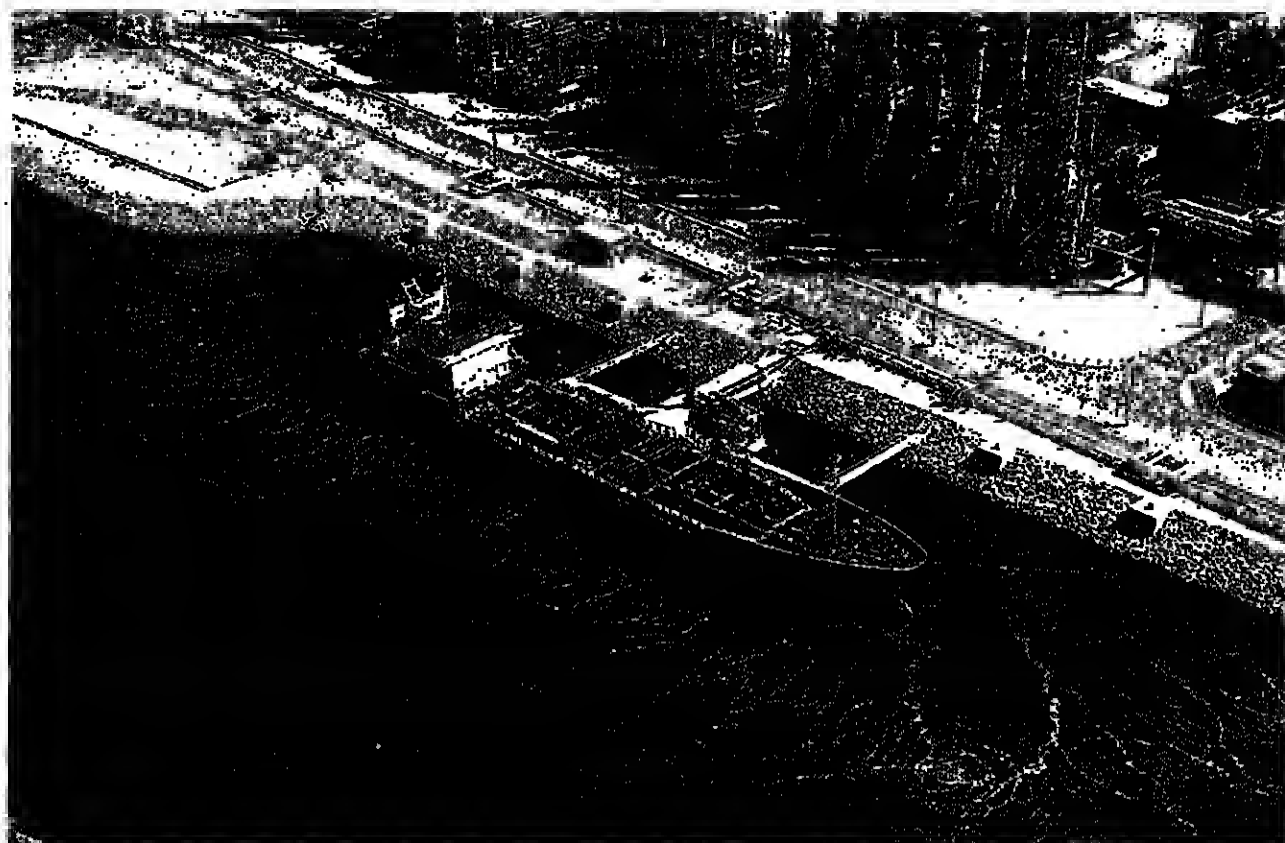
Bubbles to battle oil spills

Air bubbles have become the latest weapon in the battle to contain small oil spills from tankers, Robert Corzine writes.

Shell has installed a bubble-based containment system at its Stanlow manufacturing centre at Ellesmere Port in Cheshire, pictured right.

A wall of air bubbles released from hundreds of small holes in hoses anchored to the bottom of the Manchester Ship Canal is strong enough to confine minor spills of oil or chemicals, giving crews time to activate more substantial containment systems, like inflatable booms. The system was first tested by the Royal Navy at Plymouth.

Captain Brian Davies-Patrick, Shell's marine superintendent at Stanlow, says the bubble barriers are akin to "immediate first aid". The company, however, says it has had few spills from tankers at the Ship Canal berths.



Planners urged to discourage use of cars

By Charles Batchelor, Transport Correspondent

Local authorities in England will be encouraged to take planning decisions that limit the scale of out-of-town developments and reduce reliance on private cars under guidance issued yesterday.

Mr John Cummor, environment secretary, announced planning guidelines intended to reduce the growth of car and commercial vehicle journeys and to increase the scope for use of public transport.

The planning guidance note represents the most detailed statement on transport policy since the government committed itself to an environmental strategy at the 1992 Rio Earth Summit. Three main aims of the new planning policy are:

- To ensure that new developments which necessitate journeys are built where there is a choice of transport. Shops, offices, cinemas and leisure centres should be close together so one journey can serve several purposes.
- To provide housing developments

with public transport links and nearby local services so journeys can be made on foot or bicycle.

- To improve the quality of life in towns and cities - which are efficient transport locations - while maintaining the vitality of the countryside, to reduce the need for long-distance commuting.

Consistent policies to reduce the need to travel could result in a 15 per cent reduction in fuel consumption and exhaust emissions over 20 years, Mr Cummor said.

The impact of the new policies will be gradual because only 1 per cent to 2 per cent of the country's stock of buildings is renewed each year. But over time the new policy, combined with the government's plan to raise fuel duty by at least 5 per cent a year, will make a difference.

Environmental group Friends of Earth said traffic growth would not be cut while "motorway mania is allowed to continue". The transport department will soon announce a review of its £23bn road-building programme.

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NEWS: UK

Consumer spending cut back by tax fears

By Emma Tucker and Andrew Taylor

Evidence that UK consumers reined back their spending in February ahead of next month's tax increases yesterday raised expectations that the government may have to ease the burden of higher tax bills by cutting interest rates again.

The Confederation of British Industry said its new distributive trades survey confirmed that unimpressive sales in January were more than a "flash in the pan". The data showed that last month retailers reported the lowest year-on-year increase in sales

since volumes started to rise in January 1993.

But other figures yesterday pointed to robustness in the UK building industry. Construction orders won by contractors were 30 per cent higher in the three months to January 31 than in the corresponding period 12 months earlier.

The figures, published by the Department of the Environment, indicated that the upsurge in orders since the autumn was continuing to provide further evidence that the recession in the industry may be coming to an end.

The CBI said it was not particularly concerned by the slowdown in retail sales growth. Mr Nigel Whittaker, chairman of the confederation's distributive trades panel, said it probably reflected the fact that some consumers were already anticipating the impact of tax increases due to take effect in April.

"Equally, other consumers may also be holding back until they are sure just how much their pay packets will be affected", he said.

Retailers were confident they would "weather the storm" of tax increases. "It will cause a bit of a hiccup for a

month or two. But the underlying trends suggest we are going to emerge from it in a satisfactory way," said Mr Whittaker.

Overall, 40 per cent of retailers surveyed said business was higher than in February 1993, while 30 per cent said it was lower. The 10 per cent difference between the two figures compared with a positive balance of 15 per cent in January, and was the smallest since January 1993.

Only 15 per cent of retailers said sales were good for the time of year, while twice as many - 33 per cent - thought they were poor.

Inflation continues to show few signs of picking up, according to the survey. A positive balance of 20 per cent of retailers reported that prices were up on 12 months earlier. With the exception of January's balance, this was the weakest price trend since the survey began in 1983.

The survey also showed that imports are increasing their presence in British shops. The CBI said the proportion of deliveries from suppliers accounted for by imports increased in the year to January. A positive balance of 1 per cent in January rose to 7 per cent in February.

Cammell Laird shipyard sale is 'imminent'

By Ian Hamilton Fazel, Northern Correspondent

Cammell Laird, the Merseyside military shipyard which closed last year, is within weeks of being sold to a ship repair company, which plans to employ 1,600 people there by the end of next year.

VSEL, the Barrow-based nuclear submarine builder which owns the yard, yesterday confirmed that the sale was imminent, with a March 31 deadline imposed for completion.

The bidder is Coastline Industries, which already leases Cammell Laird's dry docks and other facilities and has taken on about 600 workers in the last year to fill contracts with several shipping lines and owners.

Coastline was founded five years ago by Mr John Stafford, a former Grant Thornton accountant, to exploit ship repairing opportunities following the recovery of the port of Liverpool and intensification of Irish Sea trade.

The deal was negotiated in January by Mr Amin Amir, corporate finance partner of Grant Thornton in Liverpool, but completion has been bogged down by legal arguments over site values and long-term environmental liabilities.

These are understood to have forced VSEL to lower its

price, while confining future use of the site to shipbuilding and ship repair.

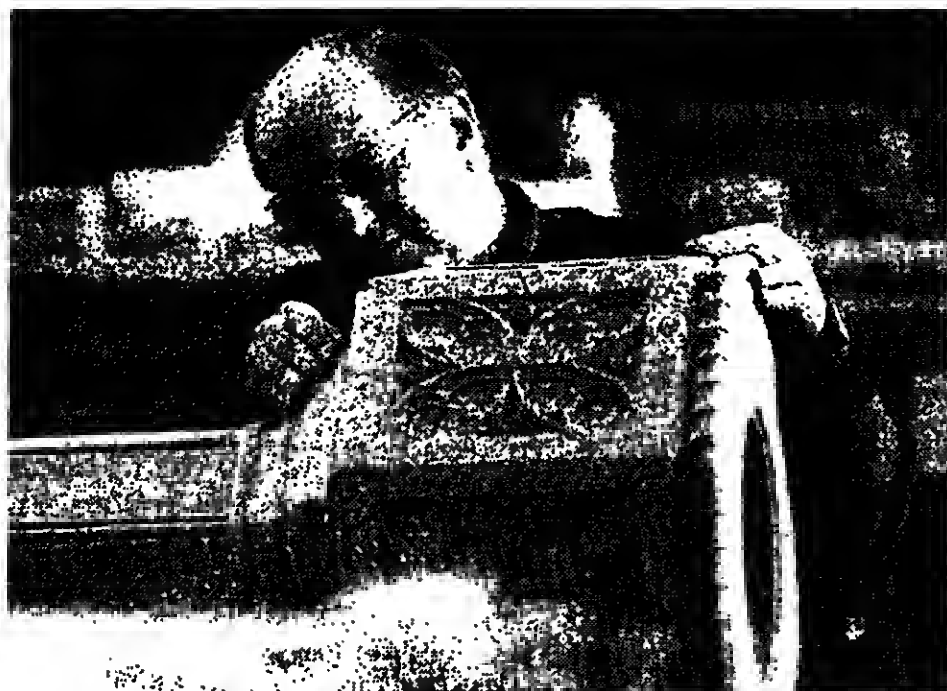
VSEL has imposed the March 31 deadline to force sale or withdrawal. Mr Norman Broadhurst, VSEL finance director, said: "There are other shipbuilding companies now interested. We gave Coastline exclusivity, but it is now up to them to complete."

Mr Jonathan Diggins, director of the Manchester office of Murray Johnstone, the Glasgow-based fund manager, yesterday confirmed it would be underwriting the deal. The price is not being disclosed, but about £10m is understood to be available. Allied Irish Banks is providing loan and working capital for Coastline's expansion.

Rival bids for Cammell Laird are understood to depend on the European Commission allowing intervention funding. Labour and Tory MPs from the area discussed this in Brussels yesterday.

However, VSEL has been consistently refused EU help for Cammell Laird because it made warships - intervention funding is limited to civil yards faced with closure.

If the deal is completed, Coastline will take over Cammell Laird's all-weather construction hall, three dry docks and its wet basin. Some of the facilities may be leased later.



Victor Jarvis works on an ornamental font at the Thompson factory in Yorkshire

Company carves out contract

A small Yorkshire factory specialising in hand-carved furniture has won its biggest-ever order - from the owner of one of America's largest furniture companies.

When Edwin J Shoemaker wanted to restore a Lutheran chapel in Monroe, Michigan, in memory of his late wife, he could not find the craftsmen to do the job in the US, despite owning 18 furniture factories. So he turned to the firm of Robert 'Monsey' Thompson, in Kibbourn, N Yorks, whose pieces bear the distinctive carved mouse trademark.

When the £170,000 contract for pews, altars, doors, and a crucifix is finished next week, 32 staff will have put in 10,000 man-hours over 9 months.

Fishermen urge renewal of seal cull

By James Suxton, Scottish Correspondent

The highly controversial issue of culling seals is to be raised by UK fishermen when they meet a government environmental agency later this month. The fishermen say seals are threatening their livelihoods by the damage they cause to fish stocks and to fishing gear.

The fishermen, from the seals working group of the Scottish Fishermen's Federation, will tell Scottish Natural Heritage, the government's

environmental agency for Scotland, that it is time for renewed culling to reduce seal numbers. The group includes representatives of fishermen's organisations in England and Ireland.

Culling was abandoned in 1978 when the then Scottish Secretary bowed to intense pressure from environmental groups. It is widely accepted that the number of grey seals around the UK coast has risen since then: the fishermen believe it has gone up from 70,000 to between 100,000 and 110,000, and is increasing by

about ten per cent a year. About 90,000 grey seals are thought to be in Scottish waters.

Mr Roddy McColl, chairman of the group, says it has scientific evidence suggesting that seals are eating up to 240,000 tonnes of fish a year, of which half is of commercially exploitable species. With some European Union fish quotas amounting to about 100,000 tonnes a year, this means that "seals have a substantial EU quota to themselves."

Scottish Natural Heritage, which will be meeting the

fishermen on March 23 at their request, said yesterday: "We feel the case has to be well proven that seals are causing the damage before protection can be lifted. So far the evidence is not conclusive."

The fishermen, who last raised the issue of culling seals about three years ago, hope that the SNH might at least recommend carrying out more research into seal numbers and their effect on fish.

Under the 1970 Conservation of Seals Act fishermen can obtain licences to shoot individual marauding seals.

Britain in brief



Cable seeks TV deal over Wimbledon

The cable television industry proposed co-operation with the BBC over acquiring rights to the Wimbledon lawn tennis championships. The BBC's four-year agreement with the club comes to an end this summer and British Sky Broadcasting, the satellite venture backed by Pearson, owners of the FT, has said it will bid against the BBC.

The cable industry, which has become more interested in acquiring exclusive rights wants to be able to televise play on the outer courts rarely covered by the BBC. In return cable could help the BBC with the cost of acquiring the rights to televise Wimbledon.

VAT cut in Manx budget

Value added tax is to be cut on some tourism-related services in the Isle of Man in a bid to boost the industry. Measures announced in the island's budget also included a six-month penalty and interest remission scheme from April 6 for those with income tax and VAT liabilities relating to income omitted or understated in declarations since April 1987.

The treasury hopes the amnesty, designed to enable people and companies to regularise their liabilities without incurring penalties or interest charges, will produce several million pounds of estimated outstanding tax debts.

Curbs sought on wind farms

Restrictions on wind farms are backed by the Wales Tourist Board in a new strategy for tourism. It endorses the policies of the Countryside Council for Wales which is opposed to wind farms in national parks and other designated areas.

Fortex shelves lamb scheme

Hopes that up to 700 jobs could be created in Scotland or central Wales were dashed when the Fortex Group of New Zealand shelved plans for a large lamb processing plant. Fortex blamed the decision on disappointing half-year results, which it said were due largely to loss of livestock in severe storms in New Zealand.

Top military post filled

General Sir Peter Inge, below, became Britain's top military officer in succession to Sir Peter Harding, who resigned as Chief of the Defence Staff after allegations of adultery.



The 59-year-old officer became Chief of the General Staff two years ago after service in Hong Kong, Malaya, Libya, and Germany, had been acting as the caretaker military adviser to the government.

Kop for sale

Fragments of the stepped terrace known as The Kop at Liverpool Football Club are to be sold for charity. The embankment, on which 20,000 fans can stand, was named after the hillside on which the battle of Spion Kop took place in the Boer War. The terrace is to be bulldozed at the end of the season under new safety guidelines. Pieces of concrete from The Kop, which to many fans is a symbol of the club's former domination of domestic soccer, are to sell at between £2.99 and £32.



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The A to Zloty of Poland.

On Friday, March 18 the Financial Times is publishing an in-depth survey of Poland. Poland is the biggest and most strategically placed country in Central and Eastern Europe with its economy expanding faster than any other European country. But is it the big investment opportunity the world has been waiting for? Among other issues the survey will take a close look at the restructuring of the country's industry and banking system as well as the booming stock exchange.

FT Poland Survey.

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MARCH 23

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CONTINENTAL

Michael Smith explains how companies can now control electricity costs

Keith Smith, buyer of utilities at the McDonald's fast food chain, is beaming at a chart of one restaurant's electricity consumption. He likes the power it gives the company's restaurant managers.

"Look at that," he says. "They've done all the right things there. The consumption falls when it should; the store workers have switched off the cookers and lights when they do not need them. It's a perfect example to show to other stores."

The chart comes courtesy of Eastern Electricity which, from next month, is to supply power and associated services, including diagrams showing past consumption, to 500 McDonald's stores in England and Wales.

Eastern's willingness to supply power and other facilities as part of the service, yet still undercut offers from rival power companies, was one reason why it won the business.

In the past few months throughout Britain big companies like McDonald's have been evaluating for the first time a range of offers for power supplies as they and the suppliers gear up for the next phase in the liberalisation of the market.

From April 1 any electricity consumer using more than 100 kilowatt hours at the peak of its demand will be able to buy its supplies from any registered supplier including the 14 mainland UK distributors and the two England and Wales generators. Until now they have had to buy power from their local distributor.

The previous limit of 1 megawatt, 10 times the new threshold, encompassed only about 5,000 consumers. From April about 50,000, including businesses, schools, hospitals and leisure centres, will be able to shop around and many are taking advantage.

More than 7,000 in the 100kW to 1MW market, a fifth of those eligible, have already made arrangements to take their supplies from a company other than their regional electricity supplier. The industry expects the figure to reach about 15,000 within the next year.

Price cuts have reached 20 per cent for a handful but the majority which have switched are estimated to be making annual savings on their electricity bills of between 4 and 10 per cent. Many of those which have stayed with their regional distributor have also gained financially.

But the benefits of the liberalised market are not just in the price. Companies, or at any rate the large ones, are finding they are in strong position to demand a tailor-made service which can improve their energy management.

As a large company, with all the advantages which that brings for

The power to choose



Electricity, not burgers: Keith Smith with consumption charts at McDonald's

bulk buying, McDonald's was better placed than most prospective buyers - yet it received offers for the whole country from just four suppliers of the 14 approached.

Smith was impressed by only one company other than Eastern. "It was apparent that several suppliers were poorly prepared. There was not the expertise to deal with the market. One company, for example, had a very good salesman but poor back-up."

"Several of the offers we received had hidden costs," says Smith. Some were able to offer charts showing consumption in each store by the half hour but they wanted to charge extra, on top of the prices

they had quoted, and that was already more than Eastern's quote. Smith says McDonald's has become much more conscious of energy costs in the past two years and now sees the half-hourly breakdown of consumption as an essential management tool. "It gives the manager of a store a picture of what has been happening in the store even at times when he is not there."

McDonald's estimates that it will save £1.4m on its energy bill each year as a result of the deal with Eastern, which is worth about £18m. A separate deal in Scotland for the company's 20 stores there is leading to savings of more than 30 per cent.

Another company taking advantage of the newly competitive UK electricity market is Stakis, the hotels and casinos group. Stakis will make significant savings on its electricity bill after a deal with Scottish Hydro-Electric involving the 25 of its 52 hotels and six casinos which are big enough to be able to shop around for supplies. It expects its £23m-a-year electricity bill for the 31 units in the Hydro deal to fall by about £250,000. Like McDonald's, Stakis was not spoiled for choice. Bill Gumm, in charge of utilities purchasing for the group, says only the two Scottish power distribution companies were prepared to make an offer covering hotels throughout the UK.

Stakis's main requirement was simplicity. "Electricity bills seem to us to be far too complicated with different charges for maximum demand for supply and for different times of the day. We wanted a uniform price for each unit of electricity which is the same for all hotels and for that price to include everything."

"We have limited resources and a single price makes billing far easier to double check. It is also useful for comparison purposes. If one hotel is using far more units than another with similar occupancy rates we will know there is something wrong. Perhaps they leave everything on in the kitchen overnight."

Both Hydro-Electric and Scottish Power were able to meet Stakis's request for uniform prices but Hydro's tender was lower.

Not all companies, however, have found it easy to shop around. At Fowler & Holden, John Hardy, managing director, bargained electricity suppliers for several months before he received an offer he considered may be acceptable. "At first I could not get suppliers to compete," he says. "They seemed only interested in making decent offers to large companies. But large companies are my competitors and if they are getting big cuts in their electricity bills I want them too."

The first six offers made to Fowler would have resulted in its power bill remaining at about £26,000 a year. It was only this week when one company, Powerline, the Midlands Electricity subsidiary, revised an earlier proposed deal to produce annual savings of about £2,000.

The lateness of the proposed offer means Fowler will be unable to change supplier until after April 1, since the electricity authorities need 20 working days' notice. Hardy says the delay has been worthwhile. "Unless we had been prepared to wait, the introduction of competition would have meant virtually nothing to us."

Seven strategies to change your company

There is more than one way to tackle organisational upheaval. Adrian Furnham considers the options

The trouble with the idea and practice of organisational change is that it is both boring and anxiety provoking. The number of magazine and newspaper articles, courses, memos and self-help books dealing with change is overwhelming.

"Adapt or die; change or decay" is not a simple rallying cry for the senior manager, it is a reality. But the question is how to bring about successful change to maximise effectiveness and minimise pain.

Managers choose different strategies with varying consequences.

● **The fellowship strategy:** This approach relies heavily on interpersonal relations, using seminars, dinners and events to announce and discuss what needs to be changed and how. People at all levels are listened to, supposedly treated equally and conflicting opinions are expressed. This "warm and fuzzy" approach emphasises personal commitment over ideas - the change process may have serious problems getting going as a consequence.

Because this strategy is adverse to conflict it can miss crucial issues and even waste time. Many fellowship-types leave the organisation and can only be replaced by those who have a need to belong.

● **The political strategy:** Here the power structure is targeted by attempting to influence the official and unofficial leaders. The strategy seeks to identify and persuade those in the organisation who are most respected and who have large constituencies.

Political strategies flatter, bargain and compromise to achieve their ends. But this destabilises the organisation because of ongoing shifts in people's political stances. Maintaining credibility can be difficult because the strategy is so obviously devious. Getting people to show their true colours in this way is never simple.

● **The economic strategy:** The cynical economist believes that money is the best persuader. The person who controls the purse

strings can buy or change anything. Everybody has a price. This is the rational "homo-economics" approach that assumes people act more or less logically but that their logic is based on economic motives. But "buying people off" can be costly and the effects short-term.

The strategy also ignores emotional issues and all questions besides bottom-line profit.

● **The academic strategy:** This approach assumes that if you present people with enough information and the correct facts they will accept the need to change. The academic strategist commissions studies and reports from employees, experts and consultants. Although such strategists are happy to share their findings it is difficult to

Most people do not like being treated as machines and so do not feel committed to changes

mobilise energy and resources after the analysis phase. Analysis paralysis often results because the study phase lasts too long and the results and recommendations are frequently out of date when they are published.

● **The engineering strategy:** This is the technocratic approach that assumes that if the physical nature of a job is changed, enough people will be forced to change.

The strong emphasis on the structural aspects of problems leads to a sensitivity to the environment which is particularly helpful in unstable situations.

The concern over channels of communication can prompt structural change, but fails to commit most people. Most people do not like being treated as machines and hence do not feel committed. Such change can also break up happy and efficient teams. The strategy is limited because only high-level managers can really understand it, it is impersonal and it ignores the

question: What is in this for me?

● **The military strategy:** This approach is reliant on brute force and sometimes ignorance. It is at times used by the military and the police, students, pressure groups and political parties. The emphasis is on learning to use the weapons for the fight. Physical strength and agility are required and following the plan is rewarded. But the change-enforcer cannot relax, in case the imposed change disappears. Furthermore, force is met by force and the result is ever-escalating violence.

● **The confrontational strategy:** This high-risk strategy reckons that if you can arouse and then mobilise anger in people to confront the problem, they will change. Much depends on the strategist's ability to argue the points, as well as being able to stir up anger without promoting violence. This approach encourages people to confront problems they would prefer not to address but tends to focus too much on the problem and not on the solution. Anger and conflict tend to polarise people and can cause a backlash.

Few of these strategies occur in isolation. But they do have different basic assumptions about who to influence, how to proceed and what to focus on. Each tends to be effective at addressing certain change problems but very bad at dealing with others. The political strategy has problems with credibility; the economic approach with maintaining change, and the academic with implementing findings. But for the professional who must demonstrate his worth to the organisation by implementing change, any of the above might help him.

The trouble is that strategies tend to be chosen by chief executives for personal reasons rather than as a result of any well-considered set of options. An inappropriate strategy may cause more trouble than the initial reason for change.

The author is head of the business psychology unit at University College London.

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Sietan Collignon, Director of Research, Association for the Monetary Union of Europe, Paris

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Michael Rauter, S.V.P., Bank Julius Baer & Co., Zurich

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BUSINESS AND THE ENVIRONMENT

WORLDWIDE WASTE

Big boys' game comes under fire

Germany's national recycling scheme faces growing attack, writes Ariane Genillard



Wuppertal, a smoky town in the recession-hit coal mining region of northern Germany, is hardly inspiring. But for Ernst von Weizsäcker, one of Germany's most prominent environmentalists, this is just the place for an institute devoted to the fight against pollution.

Von Weizsäcker, of the Wuppertal Institute for Climatology, recently announced that he was retiring as president of the advisory council of Duales System Deutschland (DSD), Germany's three-year-old national recycling scheme.

Von Weizsäcker calls Germany's most ambitious environmental project a "dangerous manipulation" which "serves the throw-away society". He has joined the swelling chorus of critics who claim that the waste disposal scheme is misconceived.

Von Weizsäcker's criticism is directed at the monopolistic structure that characterises DSD and makes the country's recycling industry increasingly concentrated in the hands of a few utilities and energy groups.

DSD was created in 1991 by 600 companies in response to the packaging law drawn up by Klaus Töpfer, the environment minister. This makes manufacturers and retailers responsible for collection and recycling of packaging waste.

It also sets collection and recycling quotas, which increase over time and must be enforced nationally.

Industrial groups in Germany set up DSD as a national waste collection scheme, which signed contracts with waste recyclers. To meet the cost of collection, DSD imposes a fee, borne mostly by consumers through higher prices and shown as a green dot on packaging.

Because the law insisted the system should be nationwide, DSD quickly spread to nearly all German cities. Few German

households are without the special yellow bins for packaging waste with green dots.

Three years after its creation, DSD's quasi-monopoly has angered middle-sized German recyclers and environmentalists who say the giant waste collector is squeezing out of a profitable market the small players who represent a pool of innovation for new environmentally-friendly recycling technologies.

The Federal Cartel Office has admitted there is a problem but argues that DSD is only fulfilling the packaging law. Undaunted, the medium-sized companies are intensifying their lobbying efforts within government circles. They point out that in 1992, more than 140 waste management companies were acquired by larger groups.

'Innovation and market strategies for recycling specific waste products no longer have a chance'

compared with 60 in 1990.

The medium-sized companies are also protesting against 10 year-long contracts signed by DSD with municipalities and with the large utilities and energy groups. "Innovation and market strategies for recycling specific waste products no longer have a chance," explains the federal association of medium-sized companies (BVMW). The association is proposing continuous tender processes and price negotiations, which would allow them to bid for DSD contracts. They add that such measures would also open the market to foreign competition.

Waste disposal companies created by municipalities now make up one in three of DSD's clients. "Municipalities immediately saw a tremendous source of revenue in this business

and made sure the contracts did not escape them," says Franz-Josef Fraundorfer, managing director in the German office of Arthur D Little, the consultancy group.

Large utilities and energy groups have also moved into waste recycling. RWE Entsorgung, the waste management subsidiary of RWE, Germany's largest utility group, has a turnover of more than DM2bn (£700m). Three years old, it has acquired 100 companies in its expansion drive, and DSD accounts for 15 per cent of its business.

Other German concerns have also stepped in, with Veba, the Düsseldorf-based energy group, processing 120,000 tonnes of plastics in a recycling plant linked to its oil refinery in Bottrop. And Thyssen Handelson, a subsidiary of Thyssen, the big engineering and steel group, is involved in building up recycling plants in eastern Germany.

These groups argue that the future of waste disposal in Germany lies with those who can invest large sums in complicated recycling plants. High investments also justify long-term contracts, DSD officials say.

According to the Environmental Council, an advisory body to the federal states, four or five companies are likely to share some 40 per cent of the domestic waste market in coming years.

DSD says the concentration process in the industry had started before it came into being, but medium-sized companies claim the DSD's structure favours large companies. "DSD is dominated by companies such as Unilever and Procter & Gamble who have no interest in meddling with the small players. It is a big boys' game," says one entrepreneur.

The government has meanwhile ignored critics from the smaller companies. Töpfer says his packaging law achieved a 13 per cent drop in packaging waste in Germany in 1993.

Next week: US.

A novel approach to one of the US's most common but most intractable environmental problems is being tested by a team of scientists at a US federal uranium-processing facility in Kentucky.

The field test has nothing to do with radioactive waste or nuclear safety, however. The scientists are seeking a process for cleaning up leaked fuel, industrial solvents and other substances which have contaminated the soil at thousands of sites in the US. The technology raises new hope that many of these acres of land can return to productive use. It also promises to speed up the faltering 14-year effort to clean up the worst of the areas.

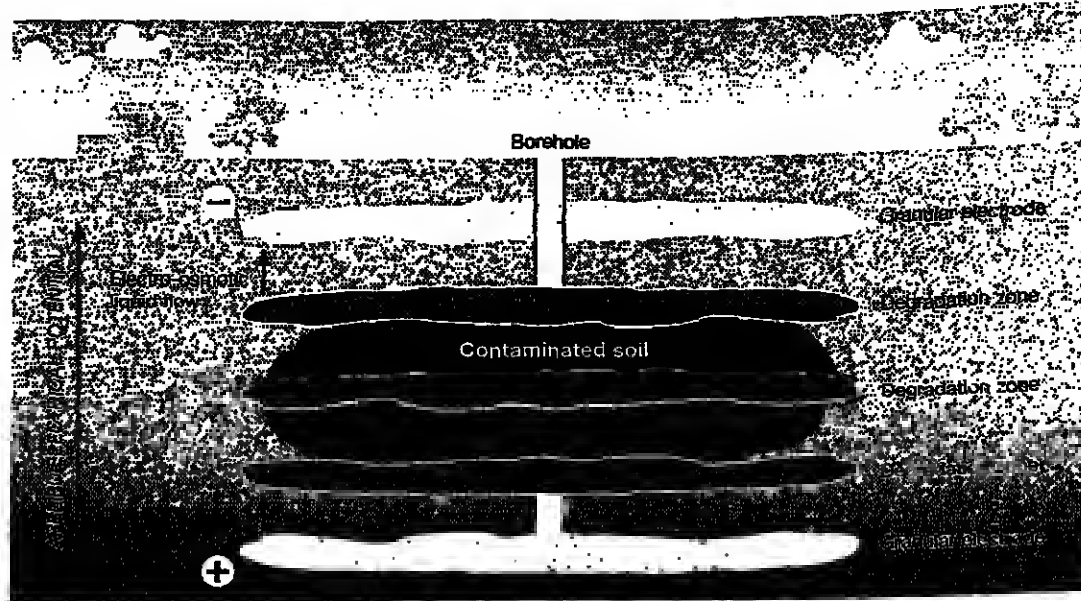
"One of the things that has hampered progress is a slow pace of technological innovation," says Bill Roberts, a toxic waste expert at the Environmental Defence Fund, a private lobbying group. Of the 1,200 to 1,300 sites designated as the most dangerous under the Superfund programme, set up in 1980 by the US government's Environmental Protection Agency (EPA) to clean up contaminated land, about 200 have been reclaimed so far.

The new technique, known as the lasagne process, involves using electrical current to draw wastes through "treatment zones" in the soil. Toxic waste materials can often be rendered harmless in the zones, which resemble the layers of a lasagne, without being brought to the surface. Scientists say the process is effective in densely packed soils that are nearly impossible to reclaim with current techniques. It may also prove cheaper and safer.

As part of a wider initiative announced in January by the EPA, the project highlights the Clinton administration's policy of encouraging co-operation between the public and private sectors and among rival companies in the fight against pollution. Three big US industrial groups, Monsanto, DuPont and General Electric, have taken leading roles in the project, together with the EPA and the Department of Energy.

"The common denominator of the primary collaborators was that we each had difficult and expensive soil clean-up problems to deal with and were frustrated by the lack of cost-effective technology to do the job," says Philip Brodsky, director of corporate research and environmental technology at Monsanto, the big US chemical group. "The EPA's willingness to play a matchmaker role was critical in getting the process rolling."

Soil remediation lends itself to joint research and development. "There are economies of scale that come into play here," Roberts says. "There is no long-term return in a company investing in this kind of new technology by itself."



Lasagne recipe for soil renewal

A new technique for salvaging contaminated land is being tested in the US, as Frank McGurty explains

The effectiveness of the lasagne process has yet to be demonstrated, however, with testing so far limited to small-scale trials. The Kentucky site where its evaluation begins this spring was chosen because it is typical. In an isolated storage area at the facility, the solvent trichloroethylene, widely used as a paint stripper, has penetrated the dense soil. The EPA says it will be "a couple of years" before comparisons of the process's cost and efficacy can be made.

Currently, the main approach to dealing with contaminated land is to excavate the toxic material and either incinerate it or seal it in watertight pits. However, toxic substances, leaking from ruptured tanks, for example, may spread deep below the surface. The expense is also prohibitive, and the risk of human exposure is great.

If the contamination is deep, but the soil is relatively permeable, wastes may have collected in ground water, which can be pumped to the surface and neutralised. But in soils with impermeable clay layers, so-called "pump and treat" methods are ineffective. Residual contamination usually infiltrates fissures in the hard clay

below the ground water and eventually seeps back in.

The lasagne process may provide a solution in such cases. Brodsky, who initiated the project, says various geological conditions are present in most sites and it is impossible to pinpoint which may be suitable for the lasagne treatment. But the technology may contribute to an overall solution in a substantial proportion of them.

Brodsky's idea was to combine three existing technologies. First, a process called electro-osmosis flushes the contaminants out of the clay fissures. A cathode is inserted into the ground, which emits low-voltage electrical current that pulls the positive ions in the waste droplets at the rate of about once an inch a day.

Second, a series of "treatment zones" - the lasagne's layers - are carved in the soil. The top and bottom strata are filled with an electrical conductor, such as graphite. Waste gathers in the middle layers when the current is switched on.

The third step deals with the contaminated material once it is there. Often, catalysts are available to help convert hazardous compounds to benign substances once inside

the treatment zones. Alternatively, "bioremediation" systems to degrade the waste organically are being developed by a number of companies, including Monsanto, DuPont and GE. Another option, used in the Kentucky test, is to put activated carbon in the treatment zones to absorb the contaminants.

The new technology has surfaced at a propitious time. Last month, the EPA proposed sweeping revisions of the Superfund law, following widespread perception that it has failed to achieve many of its goals.

Among its proposals, the EPA would ease standards for cleaning up some Superfund sites in an effort to encourage redevelopment of abandoned land. More importantly, the new act on flexibility is likely to spill over into state and federal rules applying to cleaning up the thousands of waste sites not covered by the Superfund programme.

Even if the lasagne project fails, Brodsky believes the joint effort will continue. "The collaborative paradigm has already proved very productive," he says, citing advances in bioremediation, soil flushing and other areas.

PEOPLE

Carlton adjusts its managerial contrast

Carlton Communications moved yesterday to integrate the management structure of its ITV operations following its recent acquisition of Central Independent Television.

Andy Allan, right, managing director of Central, is to become chief executive of Carlton UK Television from mid-April. A new managing director of Central Television, yet to be appointed, will report to Allan, who will also be responsible for the sales operation of the two ITV franchises, the largest in the ITV network.

Allan, 51, has worked in broadcasting for nearly 30 years, beginning as a presenter and producer and later becoming a programme editor in the light entertainment department of ABC television. He is a former head of news at Thames Television and joined Central as director of programmes in 1984 from Tyne Tees Television, where he had been director of programmes and deputy managing director. He is also a governor of the National Film and Television School.

Nigel Wainman, the present chief executive of Carlton Tele-



Both Carlton Television and Central will continue to operate under separate boards, as part of the terms of their broadcasting licences.

"The opportunity to take responsibility for ITV's two largest broadcasters is irresistible," says Allan. Leslie Hill, chairman of the ITV Association for the next two years, remains chairman of Central.

Perlin leaves Sears and goes shopping for himself

House-cleaning continues at the top of Sears with the resignation of Howard Perlin, the director in charge of acquisitions and disposals; he has been on the board since 1984. Perlin started seven years before that as personal assistant to Geoffrey Maitland Smith, the then chief executive and now chairman.

Perlin, 47, says that, having masterminded the disposal of Satellite Information Services last month, he has brought the group to "where it wants to get for the moment," with the business focused on retailing and home shopping.

Since Liam Strong came in as chief executive in early 1992, there has been a rapid turnover of executive directors. Aside from Roger Groom, who came on to the board in 1991, Perlin was the only executive director who remained from the pre-Strong era. Strong's own difficulties in changing the culture at Sears were illustrated towards the

end of last year when Stephen Park, the finance director he had brought in from Hanson just 16 months previously, resigned.

Perlin, who joined Sears from First National Finance Corporation, reckons he has "probably gathered more experience than most merchant bankers, having completed approaching 100 transactions, including 30 MBOs" in his time with the group. Disposals in which he had a hand included William Hill and Asprey and he was also involved in the acquisition of Freeman.

He now plans to put this to good use by setting up his own private consultancy - very much a one-man-band - with the aim of providing corporate finance and business strategy advice across a range of industries. He is also building up a portfolio of non-executive directorships, and has one public company already appointment lined up.

NatWest's newest customer runs the bank

Even before taking up his role in the new post of finance director for National Westminster's UK branch business, Paul Biddle has a related task to perform: to become a NatWest customer himself.

In moving from being finance director for Digital Equipment, the computer group, Biddle sees himself becoming a NatWest bank customer but not a banker.

He says that he regards "the business I'm joining as fundamentally a retailing business - it just happens to be financial products they're selling," he says.

He believes his new job - which he takes up in mid-April - will enable him to draw on his experience in industry. In the past he has worked for Unilever and Bank Xerox, following his training as a chartered accountant.

The priority he sees for the years ahead will be to find the right balance of ways of

distributing products to customers, through electronic and telephone banking, as well as the traditional branch network.

Martin Gray, chief executive of NatWest's UK branch banking, said that Biddle's responsibilities would include developing and setting the financial strategy for retail banking operations; managing the budget planning; and liaising with other parts of the group on long and short-term financial strategies.

In creating this new role is NatWest implying it may have missed out in the past, through not having a finance director for the UK branch business?

Biddle says only that he suspects they have not put in place the appropriate management processes - such as planning and budgeting - which are "almost taken for granted in the industrial environment".

Wheatley joins with Ashtead

Alan Wheatley, a former senior London partner of Price Waterhouse, has been appointed a non-executive director and deputy chairman of Ashtead group, the fast-growing plant hire company.

Ashtead, which began as a £458,000 management buy-out ten years ago, was floated on the unlisted securities market in November 1986 and was the last winner of the USM company of the year award. Its market capitalisation has risen from £8m to £127m and pre-tax profits have jumped from £533,000 to around £5.2m in the current year, according to some stock market estimates.

Chairman Peter Lewis, 53, who founded the company with managing director George Barnett, 46, says that the company has grown to a stage where it needs a non-executive director with "bigger company experience". Wheatley, 55, who stepped down as chairman of 3i last year, is a non-executive director of N M Rothschild, British Steel, Forte and Legal & General.

Francis Watts, a partner in Reeves & Neylan and former vice-chairman, as chairman at KENT RELIANCE BUILDING

SOCIETY.

John Kerrin, chairman of Powerlite and PRP Optoelectronics and retired md of Crystalite Holdings, at Mion Electronics, part of TUNSTALL GROUP.

Patrick Thomas, md of Hermes, at WILLIAM GRANT & SONS.

Billy Carbutt, a partner at Ernst & Young, at COMAC GROUP.

Peter Ward, md operations of Vickers, at BRIDON.

Sir Robert Andrew at SOUTHERN PROPERTY HOLDINGS; John Main has resigned.

Lawrence Ziman, senior partner of Nabarro Nathanson, at N BROWN.

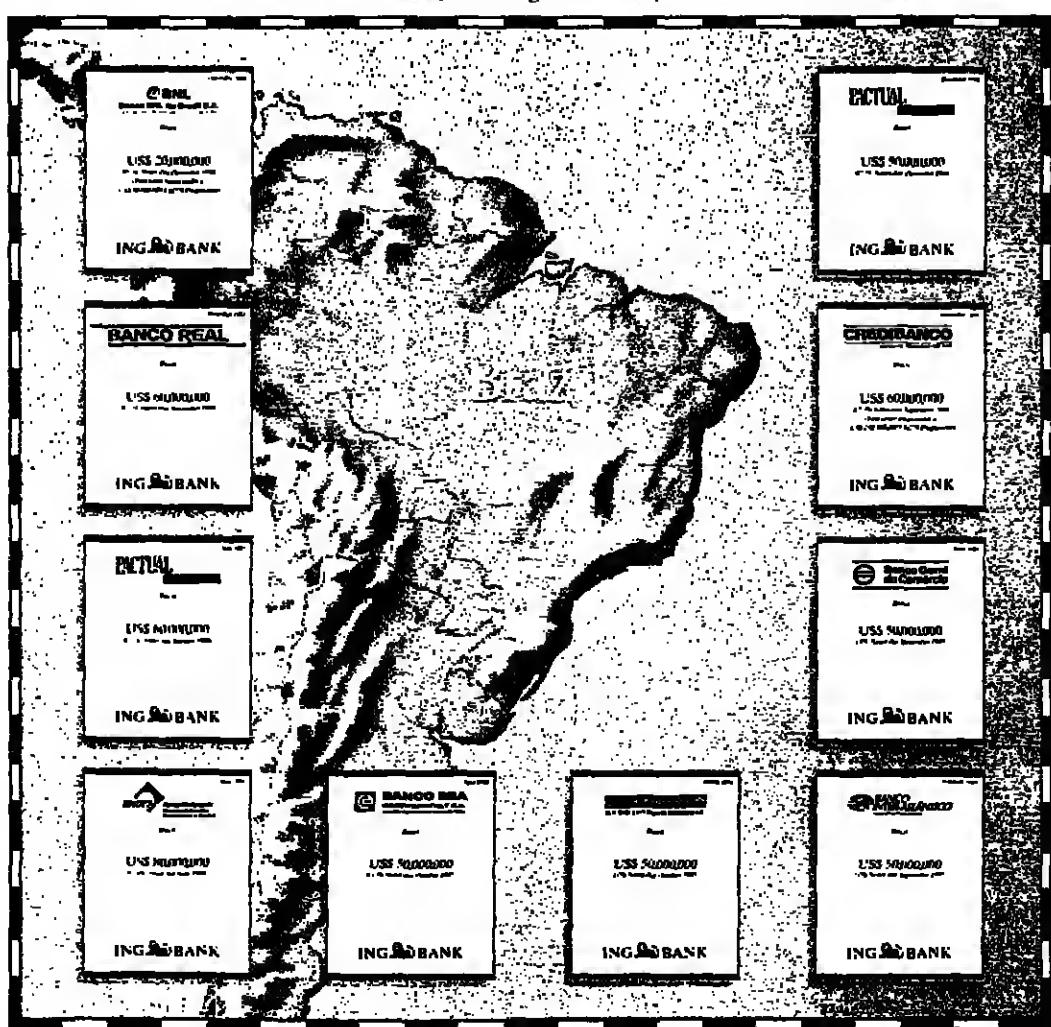
David Bowes-Lyon, who had been responsible for Union Discount's operations in Scotland and is a director of Christie's Scotland, as chairman at AFT-KEN CAMPBELL on the retirement of Billy Carmichael.

Kenneth Baker MP and Sir David English at ENCOM, the subsidiary of Bell Canada International. Mercury Communications and Jones Inter-

John Rudgard, chief executive of H.P. Bulmer Holdings, at WYVALE GARDEN CENTRES.

No.1 Lead Manager of Brazilian Eurobond Issues in 1993.

No.1 in terms of number of deals, excluding own issues (source: IFR/SDC OmniBase)



ING BANK

Internationale
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So - as *Private Eye*'s teenage poet E.J. Thrill would say, farewell *Minder*. Absolutely *Fabulous* and *The Man From Auntie*: your catchphrases were "A nice little earner", "Be a good girl and make Mummy a capuccino" and "My name's Ben Elton good night". Thursdays won't be the same without you. True, it would be surprising if we had to wait long before Elton, now such a wholly professional comedian, was back, and the BBC people claim there will be another series of *Absolutely Fabulous* though they cannot say when. As for *Minder*, it has run for 107 episodes, and although they have cried wolf before and then relented and given us more, it does seem as though one-off "specials" are all we shall get in future.

The days when television schedules were carved in granite and changed with the seasons just three times a year, seem to have gone for ever. Series which run for even 13 episodes, never mind 36, are now rare. Switch on ITV next Thursday at 8.30, the time when *Minder* has been going out, and you will see the first in a half-hour series called *Outside Edge*, worked up by Richard Harris from his splendid stage comedy about oddly matched couples in a cricket club. So far there are just seven episodes.

Meanwhile, if you switch on ITV at 8.30 tomorrow night, you can make an interesting comparison. Filling in for just one week is a *Minder* repeat, the first episode ever made, called "Gunfight At The OK Laundry" to spelling which could explain the title of Hanif Kureishi's 1985 script *My Beautiful Laundry*. From the upbeat signature tune to the location filming of London, from the central importance of the tough Terry McCann character to the subordinate role played by George Cole's laughable Arthur Daley, this shrill of what it actually was an effort by the Thames TV subsidiary Euston Films to take the most notable aspects of *The Sweeney* and turn them into a vehicle for Dennis Waterman who had played the rough diamond sergeant in that police series. When you see in this first *Minder* episode armed police leaping from a Transit van, filmed from overhead, there is no mistaking the programme's antecedents.

As time went by Waterman's limitations and Cole's strengths became clear, and the centre of gravity changed. Once McCann ceased to be the flywheel of the series there was less need for violent action and *Minder* became more a comedy of manners and character. Making the last episode mirror the first, by having Arthur instead of his minder taken hostage, served to emphasise the ways in which it had evolved. On the other hand *Absolutely Fabulous* has rarely been anything more than a comedy of manners. There have been one or two powerful inventions to relish, for instance the loathing of Patsy, the sixties reprobate, for Saffron, the sanctimonious greenie teenie, a loathing which cuts right across the grain of today's adulation of yoo and environmental agonising.

However, that has been the exception, not the rule. The rule in *40 Fab* has been a type of comedy which relies upon dialogue in a way that makes it almost as suitable for radio as for television. Interestingly, and somewhat ironically, the comedy series starring Dawn French, *Mur-*



George Cole as Arthur Daley in 'Minder', which leaves our screens this week along with 'Absolutely Fabulous' and 'The Man From Auntie'

Television/Christopher Dunkley

Farewell to a nice little era

der Most Horrid, which now provides a comedy substitute on Thursday nights, is far more concerned with dramatic "business" and the physical aspects of comedy. (Perhaps French and Saunders could get together and pool their varied talents; what a partnership...) Unlike so many series, *Murder Most Horrid* fully justifies the phrase "situation comedy".

In the opening episode French's attempt to hang herself was interrupted by the arrival of a professional assassin intent upon killing a man in a building across the street. She fits French with a walkie-talkie and sends her across to do the dirty work, but security guards present problems. Persuaded over the top to offer them "blow jobs", a phrase which means nothing to her, French bumps them off

one at a time in the gents. Written by Steven Moffat, this had the same sort of appeal as *A Fish Called Wanda*. Remarkably Episode 2, with a script by Paul Smith and Terry Kyan, proved equally good and just as funny, with French appearing to be the unbearably gossipy hostage of a bank robber but in the end turning all the tables.

The small spate of new series in what would once have been mid-season was swollen on Sunday night by two in succession from BBC1: yet another comedy, and yet another drama series about an oddball police detective. On the evidence of the opening episodes, they do not look likely to challenge French or Saunders for comedy laurels, or *Minder* for the quailpot drama crown. The comedy, *Honey For Tea*,

stars Felicity Kendal as a drop-dead gorgeous American widow who has brought her hunk of a son, Jake, to Cambridge to inveigle him into the college funded by his late father, while wheeling herself a job in the bursar's office.

It is a good enough scenario, but Michael Aitkens, creator of the superb *Waiting For God*, has mystifyingly opted for American and British stereotypes which are two generations out of date. Silly ass Cambridge dons baffled by Americanism went out with mortar boards; today they take their cue from David Lodge and earn four times on the international conference circuit. And rich Americans, raised on a PBS TV diet of British costume drama, do not split their sides at the notion of hunting anything as small as a fox.

As for *Pic In The Sky*, with Richard Griffiths as the reluctant detective who wants to leave the police and run a restaurant but is being blackmailed into staying (a thin variation on the old "one last mission" routine) we shall have to see. So far the foodie content looks more convincing than the police element, but the important question will be whether this is written from the character outwards, or is just another contrived formula: "Let's put him in a wheelchair. Oh no, *Ironsides*. Well make him an antique dealer then - damn, *Lovejoy*. How about a gourmet cook? Yes, that'll do..." Still, you never know: *Minder* was produced to a formula with a purpose rather than bursting from the breast of an impassioned writer, and that lasted 15 years.

Music in London/Richard Fairman

Stars in their own right

The great composers of the romantic era are fair game these days for conductors from the period-instrument movement. Twenty years ago Bach and Handel were still being played by symphony orchestras; ten years ago people argued that "authentic" Haydn and Mozart would never catch on.

Each decade the authentic brigade moves on to its next hunting ground. Norrington and Gardiner have already tackled Berlioz and Brahms, both making a particularly good job of the latter's *German Requiem*. Now Nikolaus Harnoncourt, known in his earlier days for his Monteverdi operas and Bach cantatas, has caught up with them. The enormous success of his Beethoven symphony cycle made further progress into the 19th century inevitable.

There is one big difference with Harnoncourt. When he conducts classical or romantic music he prefers to work with conventional orchestras - although he does his level best to turn them into honorary period musicians. The admirable young players of the Chamber Orchestra of Europe look wholehearted converts: the double-bass players play standing up, the timpanist sits on a low chair and the violinists renounce their usual vibrato.

In Harnoncourt's hands they become a lithe, red-blooded orchestral animal, with lean strings and snarling brass, ready to pounce at their conductor's next command. There is a high quota of aggression in Harnoncourt's conducting and it made itself felt from the beginning of Friday's Barbican concert with a trenchant performance of Beethoven's *Coriolan* Overture.

There was no soloist, which may account for a disappointing audience (though a noisily appreciative one). The central work was Schumann's Fourth Symphony, so different in style from Leppard's recent Schumann cycle that regular Barbican concert-goers might have wondered if they were listening to the same composer. Where Leppard was fluent and graceful, Harnoncourt dug into the music with zealous determination.

This is a conductor who always likes to spring a surprise. In Brahms's First Symphony he did not drive relentlessly along, as one might have expected, but found

time for relaxation as well. If the music still sounded stark, one suspects that for Harnoncourt overturning a century's tradition of glowing romantic performances is half the delight. As he raced triumphantly through the final brass chorale, the adrenalin count hit danger level. Other Brahms conductors, beware.

Education work in the community has become a prime responsibility of Britain's orchestras, but it costs money. On Monday the London Symphony Orchestra held a gala concert in aid of the LSO Endowment Fund to raise support for its education programme and invited Jessye Norman as the star attraction - a useful insurance policy if the ticket prices are going to be that high.

A solo recital on the South Bank earlier this year proved that Jessye Norman can fill a hall alone at prices most orchestras in this country would long to charge for large-scale symphony concerts. As that

occasion showed, she has been adventurous in learning new music, while the spontaneity has been going out of the old. Perhaps a singer needs constant renewal as an artist to keep up the momentum.

For this concert she was joined by Colin Davis, LSO Principal Conductor elect and a long-time colleague (they share a record company). They had put together a programme equally shared between two composers, tempting speculation that each of them would excel in one half. Britten for him, Strauss for her. Of course, it never works out that simply.

Britten's late cantata *Phaedra* was written for a mezzo (Janet Baker) and has usually been sung by mezzos, but it falls very comfortably for Jessye Norman's lowish soprano. Alone of the singers I have heard in it, she experienced no strain at the top. The very fullness of the voice adds another side to the character. In some of her singing of late, the extrovert outward signs of involvement have concealed a

deadness at the core, but not here: Phaedra's inner torment and shame were fully alive, the beating heart of a rounded portrayal.

There was no lack of heart in her Strauss, the closing scene from *Capriccio*. In fact, the sheer generosity of the voice and the personality was too much of a good thing. There is a cool, elegant poise written into the music of Strauss's Countess, which is smothered if the vocal line bulges with heated emotion and verbal emphasis. True Strauss stylist like Janowitz take a more refined line. Nevertheless, Jessye Norman was in lush voice. The star appeal still shines brightly.

In between came two orchestral items which were definitely not fillers. It is a luxury to hear the Four Sea Interludes from Britten's *Peter Grimes* played by a top orchestra and the LSO showed what a difference it makes. The partnership with Davis is promising a splendid future, his mature wisdom and their panache combining in a fine performance of Strauss's *Don Juan*. If the LSO continues to play as well as this, it can be the star in its own gala concert next time.

LSO concert sponsored by American Airlines; it is repeated on March 17

Ballet in Paris

'Etoiles' go for gold

The Paris Opera Ballet occasionally gives its brightest young dancers a run of special performances in which to show their very considerable mettle. So, at the weekend, the aspirant *étoiles*, feet as bright as their hopes, technique as burnished as their confidence in their training, made a bid for glory. It was, as always, an exhilarating spectacle. The Palais Garnier was crowded and the atmosphere charged with that special French belief in *glorie*. And on Saturday afternoon the young went for gold.

Chief ballet-master Patrice Bart centred this year's sessions around the Romantic ballet. So there was Bournonville, looking - shall we say - a bit French-polished, and evocations of Marie Taglioni's roles: the enchanting *Vivandière* sextet which has survived for a century, and a half thanks to notation, and Petipa's *Paquita* trio. We saw golden gifts: we must hope for golden futures and golden rewards. Certainly the performance demonstrated the grace and security of French training - the Opera's ballet school produces superb talent year after year - and the technical and artistic assurance that the Opera engenders in its dancers.

The style is Franco-Italian, brilliant in beaten steps and turns, stylish and sophisticated as to feet - the girls have virtues in point-work undreamed of by British teaching. There is nothing anemic or unduly modest about what we see, and no English Missy (I'm tempted to write "English misery"). The young are there on stage because they want to succeed; failings have to do with a desire for public approval; but *regardez-moi* is not the worst of motives. Lyricism is at a premium - a famous dancer described it to me as "dancing too slowly" - while that grandeur of scale and phrasing we admire with Russian training is largely absent.

But in matter of polish, of physical wit and clarity - the language fast, light, quickly accented - the Jennes danseurs are a delight. I loved the sextet from *Napoli*, done with southern vivacity, and was charmed by Sandrine Henault's exquisite feet in the *Flower Festival* in Genzano duet: every step was diamond-cut. Her partner was Eric Camillo, honeyant, beautifully sure, and playful with real charm. Equally fine Bertrand Belen, who sizzled through devilish solos in *La Vivandière*, and *Paquita*, and Gil Isart as James in the second act of *La Sylphide*. Why, conscience asks, cannot our young Royal Ballet aspirants do as well?

The Opera's other young virtuoso is Emmanuel Thibault. I reported on him last year. Slight in build, he has a technique which dazzles by its easy elegance as by his prowess. In the *Napoli* pas, and then in a fragment from *Le Papillon*, he showed a phenomenal facility - a circuit of the stage interspersing racing leaps with light, clear pirouettes was astonishing. He is teacher's pet, seemingly able to do with grace whatever he is asked, and unspooled and gentle in manner. He comes to life as he dances: curtain calls suggest a young man almost shy of applause.

He was partnered in *Le Papillon* by Veronique Doisneau, ideally matched with him in lightness, speed, and a sweet fragility, her dancing as effortless and beguiling as his. Very pretty, too, the sylphid sketched by Miteki Kudo, leading her James through the glens of Bournonville's second act, and turning and posing with delicious innocence. Grandly soaring was Sandrine Marache, who bounded proudly through *Vivandière* solo. My only complaint about the performance is the fact that Anton Dolin's version of the *Pas de Quatre* in which four divas of London's ballet in 1845 were brought together in a contest of charm and steely temperament, was lightly gaudy. The steps, like the Pugnol score, are pretty, and need to be prettily danced. The mock rivalries, and the mopping and mowing between Saturday's participants, was all too regrettably. Real-life tensions among ballerinas who have incarnated their great predecessors have been more subtly masked and far deadlier than this warfare of pink tulle and mones.

Clement Crisp

INTERNATIONAL ARTS GUIDE

COLOGNE

Philharmonie Tonight: Wolfgang Sawallisch conducts Vienna Symphony Orchestra in Beethoven's Second Symphony and Bruckner's Seventh. Sun afternoon: Borodin Quartet. Sun evening: Andreas Schiff piano recital. Mon: Nina Corti flamenco evening. Tues: Eartha Kitt. Next Wed: Altered Brendel. Next Thurs: Dmitri Hvorostovsky, James Galway and others (0221-2801). Opernhaus This month's repertory includes *Rigoletto* with Alexandru Agache and Leonina Vaduva, Harry Kupfer's production of Shostakovich's *The Nose* and Jochen Ulrich's choreography of Peer Gynt. Helen Donath gives a song recital next Wed, and Ben Heppner sings the title role in a new production of *Peter Grimes* opening on March 27 (0221-21 8400).

COPENHAGEN

Royal Theatre The main event this week is the first night tomorrow of a new production of *Fidelio*, conducted by Paavo Berglund and

staged by Dieter Kaegi. Casts includes Poul Elming, Tina Kiberg and Leif Roar. Repertory also includes *Otello*, Carmen, *Hänsel und Gretel*. Tomorrow: *Sleeping Beauty* and new ballets by Anne Laaksonen and Laura Dean (tel 3314 1002 fax 3312 3692).

DRESDEN

Semperoper Tonight: Sat: La traviata. Tomorrow: Harry Kupfer's new production of Handel's *Belshazzar*, with Iris Vermillion and Jochen Kowalski. Fri: Salome. Sun: Der fliegende Holländer with Ekkehard Witschke and Peter Goldberg. Mon, Tues: Zubin Mehta conducts Dresden Staatskapelle in Mendelssohn's Octet and Mahler's First Symphony (0351-484 2323).

Kulturpalast Sat: Wolfgang Sawallisch conducts Vienna Symphony Orchestra in Beethoven's Second Symphony and Bruckner's Seventh. Sun (Schloss Albrechtsberg): members of Dresden Philharmonic play chamber music by Sutermeister, Mahler, Haydn, Busoni and others (0351-486 6666).

FRANKFURT

Alte Oper Tonight: I Musici di Roma play baroque concertos. Sat: Mikis Theodorakis presents an evening of his own music. Sun morning, Mon evening: Emmanuel Krivine conducts Frankfurt Opera Orchestra in works by Blacher, Prokofiev and Franck, with violin soloist Midori. Mon (Mozart Saal): Nathalie Stutzmann song recital. Tues: Dirk

Joeres conducts West German Sinfonia in Saint-Saens, Mozart and Brahms, with clarinet soloist Eduard Brunner. Next Wed: Leni Maazel conducts Bavarian Radio Symphony Orchestra (069-134 0400). Oper Tonight, Fri, Sun: Sylvain Cambreling conducts Herbert Wernicke's new production of Duke Bluebeard's Castle, with Henk Smits and Katherine Cieslinski. Tues: Ensemble Modern plays works by Webern (069-238061).

GOTHENBURG

Konserthuset Tonight: Iona Brown directs Academy of St Martin in the Fields. Fri evening, Sat afternoon: Jun'ichi Hirokami conducts Gothenburg Symphony Orchestra in works by Verdi, Sandström and Delibes, with trombone soloist Christian Lindberg (031-167000).

HAMBURG

Staatsoper This month's repertory includes a Ring cycle conducted by Gerd Albrecht, with Gabriela Schnaut, Simon Estes and Siegfried Jerusalem in leading roles, and a new production of Hans's Dis Bassariden, staged by Christine Mielitz and conducted by Markus Stenz. Dmitri Hvorostovsky gives a song recital next Mon (040-351721). Musikhalle Tomorrow: Wolfgang Sawallisch conducts Vienna Symphony Orchestra in Beethoven's Second Symphony and Bruckner's Seventh. Fri: Alfred Brendel plays Beethoven piano sonatas. Mon:

B.B. King. Next Thurs: Andras Schiff (040-354414).

HELSINKI

Finnish National Opera Tonight, Sat, Tues: *Otello*. Tomorrow, Fri: new Stravinsky ballet programme, including world premiere of Jorma Uotinen's *Petrushka*. Sun afternoon: Academy of St Martin in the Fields (0-4030 2211).

LEIPZIG

Gewandhaus Tonight: Udo Zimmermann conducts MDR Chamber Philharmonic in official opening concert of 1994 Leipzig Book Fair. Tomorrow, Fri: Marek Janowski conducts Gewandhaus Orchestra and Chorus in works by Schnittke, Mozart and Beethoven, with piano soloist Lars Vogt. Sun evening: Gewandhaus Quartet plays string quartets by Haydn, Mendelssohn and Beethoven. Mon: Thomas Zehetmair is violin soloist with Amsterdam Bach Soloists (0341-713 2280). Opernhaus Fri: Lothar Zagrosek conducts revival of Ruth Berghaus' production of Jörg Herchet's 1993 opera *Nachtwahe*. Sat: two ballets by Uwe Scholz. Sun: Fidelio. Next Tues: Scholz's version of *Coppelia* (0341-291036).

LYON

Opéra Tonight, Fri, Sun: Neville Martinson conducts concert performances of Mozart's 18 re-pastors. Next Tues: first of eight performances of ballet mixed bill featuring choreographies by Bill T. Jones, Stephen Petronio and

Susan Marshall. March 24: Kent Nagano conducts Debussy and Ravel. March 30-April 3: Pina Bausch Tanztheater Wuppertal (tel 7200 4545 fax 7200 4546). Auditorium Tomorrow, Sat: Peter Csaba conducts Orchestre National de Lyon in works by Schumann and Liszt (7860 3713).

MARSEILLE

Opéra Tonight, Fri, Sun afternoon, next Wed: John Burdick conducts Alain Marco's new production of *Lolo* La Roi d'Ys, with cast including Nadine Denize, Alain Fondary and Luca Lombardo (9155 0070).

MUNICH

Staatsoper The main event over the coming week is the premiere on Mon of Richard Jones' new production of Giulio Cesare, conducted by Ivor Bolton, with a cast headed by Ann Murray, Kathleen Kuhlmann, Trudeliese Schmidt, Pamela Coburn and Christopher Robson. Repertory also includes Lady Macbeth of Mtsensk, Der fliegende Holländer and Peter Wright's production of *Gianni Schicchi*. There are performances of Die Meistersinger von Nürnberg on March 25, 28 and April 4 (089-221316). Gastspiel Tonight: an evening with Peter Ustinov. Tomorrow, Fri: Lorin Maazel conducts Bavarian Radio Symphony Orchestra in works by Berlioz, Weber and Bartok. Sun: opera concert with Munich Radio Orchestra and vocal soloists. Mon: Franz Welser-Möst conducts London Philharmonic in Haydn, Schumann

and Shostakovich, with piano soloist Mitsuko Uchida (089-4809 8614).

OSLO

Konserthuset Tonight, Fri: Nello Santi conducts Oslo Philharmonic Orchestra and Chorus in a concert performance of Bellini's *Norma*, with cast including Monica Pick-Hieronymi and Bonaldo Giaiotti. Tomorrow: Iona Brown directs Academy of St Martin in the Fields in works by Britten, Mozart, Penderecki and Haydn (2283 3200).

STOCKHOLM

Konserthuset Tomorrow: Roland Pöntinen piano recital. Tues: Barbara Hendricks song recital. Next Wed, Thurs: Academy of St Martin in the Fields (08-102110). Royal Opera Sat: song recital by Helena Doese, accompanied by Geoffrey Parsons. Repertory includes *La bohème*, Suppé's operetta *Boccaccio* and Natalia Makarova's production of *La Bayadère* (08-248240).

STUTTGART

Staatstheater Tomorrow, Sun, next Thurs: Philippe Auguin conducts revival of Götz Friedrich's production of *Der Rosenkavalier*, with Ellen Shade and Helmut Berger-Tuna. Fri: Marcia Haydée's version of Glazunov's ballet *Raymonda*. Sat, next Wed: Achim Freyer's production of *Der Freischütz*. Tues: Johannes Schaal's production of *Rigoletto*, with Wolfgang Schöne in title role (0711-221795).

ARTS GUIDE

Monday: Berlin, New York, and Paris. Tuesday: Austria, Belgium, Netherlands, Switzerland, Chicago, Washington. Wednesday: France, Germany, Scandinavia. Thursday: Italy, Spain, Athens, London, Prague. Friday: Exhibitions Guide.

European Cable and Satellite Business TV

(Central European Time) MONDAY TO FRIDAY NBC/Super Channel: FT Business Today 1330, FT Business Tonight 1730, 2230

MONDAY

NBC/Super Channel: FT Reports 1230.

TUESDAY

Euronews: FT Reports 0745, 1315, 1545, 1815, 2345

WEDNESDAY

NBC/Super Channel: FT Reports 1230

FRIDAY

NBC/Super Channel: FT Reports 1230

SUNDAY

NBC/Super Channel: FT Reports 2230

Sky News: FT Reports 0430, 1730.

Ian Davidson



Futile and flawed

The UK cannot impose its vision of Europe on its EU partners

It is hard to make strategic sense of the British government's campaign to restrict majority voting in Europe. Yes, I know ministers are frightened of the anti-Europeans in their party, and presumably they hope to appease them with a vigorous stand in defence of national sovereignty. But the problem is that this is a crusade which is certain to fail in the medium term, and probably in the short term as well.

In any case, why go out on a limb now? The Maastricht treaty was such a miserable experience for Mr John Major that you would think the prime minister would do his best to steer clear of all questions of principle about Europe and its development for as long as possible. Yet here he is, taking a combative stand on an issue which is bound to involve a battle on two fronts: it must lead to an unwinnable confrontation with his partners in Europe, but it must also stir up the anti-European campaigners among those who are nominally his own supporters. This is a spectacular exercise in political masochism.

This crusade is doomed to defeat, because its underlying objectives set the UK at odds with virtually all its European partners. The government pretends that it is only asking that the voting rules which protect blocking minorities in the Council of Ministers should be kept at the present level, even after the admission of four more member states: 23 votes, or the equivalent of two big countries and one small.

The reality, of course, is that the British government is trying to make majority voting more difficult than at present, whereas effective decision-making in a larger Union will obviously require more majority voting, not less.

The puzzle is that the Conservative government seems to have been manoeuvred by its Euro-phobic wing into redefining the last war but one. The windmill it is tilting at is the old fantasy that Britain's national sovereignty is threatened by the sinister federalists in Brussels, and it appears to imagine that it can creep by stealth back in the direction of a national veto. It does not seem to realise that the terms of the debate have been

changed beyond recognition.

Many years ago, in 1965-66, the Community had a shattering confrontation between France and the rest, over the rights and wrongs of majority voting. That was before majority voting was due to come into force as part of the Community's normal regime, and the French were trying to prevent it happening. After a six-month confrontation, a truce was signed in 1966 which was afterwards called the Luxembourg Compromise, even though there had been no compromise on anything. Nevertheless, the psychological shock of the crisis

effectively deterred majority voting for 20 years.

But the Luxembourg Compromise was wiped off the slate by the 1966 Single European Act, which explicitly broadened the scope for majority voting, and the agenda on the slate was rewritten by the Maastricht treaty, which also carried the majority voting trend even further.

As a result, today's central question about majority voting is the reverse of yesterday's: it is not whether a member state can be compelled by majority vote to do things it would rather not do, but whether it can use its national veto to prevent most or all of its partners from doing what they collectively want to do.

It is now clear that the first, old-fashioned question can have several different answers. Most rational people now

recognise that the purpose of majority voting is not to out-vote the recalcitrant, but to persuade them to negotiate and to compromise. But for those who will not negotiate and will not submit, there is the alternative of the opt-out: if you don't like the journey, you can leave the ship.

That was the double lesson of Maastricht: the other member states could not compel the UK to accept the social chapter, or the Danes to accept monetary union or indeed anything else in the treaty; but nor, in the last resort, could Britain and Denmark prevent the others from going ahead with the treaty they had compromised on. In the long run, the majority will get the kind of Europe they want, and the options for those who disagree will essentially be quite simple: to compromise, to submit, or to stand aside. If majority decisions are blocked inside the Council of Ministers, through systematic legal obstruction, they will be taken outside, in some other way.

If the British government is now trying to strengthen the legal methods of obstruction, it is perhaps because it is slowly dawning that the opt-out is not a satisfactory type of solution.

The plan for economic and monetary union may well prove an acute test case, and it is likely to come to a head during the 1996 Inter-Governmental Conference to review and revise the Maastricht treaty. At that moment, it will be clear which member states are still committed to monetary union. And it is quite possible that an inner core will be ready to go ahead to a single currency, conceivably in a very near future. Mr Major will then be left holding his opt-out, which means he cannot stop them, just as it means he cannot join them.

Note that the concept "blocking minority" does not exist in any European treaties. What they lay down is the number of positive votes required to pass a measure: at present 54 out of 76. The underlying assumption is that the governments which signed the treaties share a broad political consensus on the purpose of their association. That consensus did not exist in 1965. But the French lost that battle for one simple reason: they could not impose their view of Europe then, and it is time the British saw that they cannot impose their view of Europe now.

If employees of Fosco, the Birmingham-based metallurgical company, try to book business class tickets when they should be flying economy, Wagonlit Travel will let Mr John Lamb know.

Mr Lamb, Fosco's chief accountant, says the company's contract with Wagonlit gives it far greater control over business travel costs than it could ever achieve alone.

Wagonlit's technology enables Mr Lamb to obtain, at 24 hours' notice, a computerised record of where employees have travelled recently and whether they got the best deal available. If they have not, he asks them why.

Wagonlit, which is part of Accor, the French hotel and catering group, yesterday announced details of its plan to combine its business travel interests with those of Carlson of the US to create a worldwide network with combined revenues of \$10.5bn, operating from 4,000 locations in 125 countries.

Two main competitors, American Express and Thomas Cook, each operate from about 2,000 locations - either their own offices or those of client companies.

The two sides in the partnership said the new company, Carlson Wagonlit Travel, aimed to "service the growing needs of the global business traveller, to market the new brand worldwide, develop new global business travel technology and pursue immediate expansion into new business markets throughout the world, in particular the Asian and Pacific regions".

Mr Curt Carlson, the founder of the Carlson empire, says the combined travel company will be able to improve services to clients such as General Electric, which places its \$300m-a-year travel business with Carlson in Phoenix, Arizona.

Mr Carlson, whose company's other interests include Radisson Hotels and TCI Friday's restaurants, which are not part of the merged venture, says: "Big companies often have difficulty with their travel, operating in new countries where agencies often just speak the local language and airlines use different [ticket] codes".

Carlson will contribute its strengths in the US to Wagonlit's strong position in Europe. The newly-merged company will invest an initial \$40m in setting up or buying agencies in Asia, the Pacific region, Latin America and Africa, where it is under-represented. Why did they choose each other? Mr Hervé Gourio, president

Is bigger better in the global business travel industry, ask Michael Skapinker and David Buchan

Essential, or just extra baggage



dent of Wagonlit Travel, says: "Carlson is the best partner for us because we are about the same size in the travel business and at the group level. Neither is predominant, European or American."

Mr Travis Tanner, president of Carlson Travel, promises "a real working union to create the number one in business travel. Not a paper partnership, nor a smoke and mirrors arrangement." He said Carlson "needed a prominent position in Europe - to have done it ourselves would have taken a great deal of time and money".

Rivals in the industry, however, were quick to cast doubt on the prospects of merging two organisations with such different cultures. "This is not a marriage made in heaven," said one rival business travel executive. "I can't see the Americans being run by the French, or vice-versa."

The new company will have two chairmen, one from Carlson and one from Wagonlit, and two chief executives, also one from each side. Although the company headquarters will be in London, the two sides said "daily operations will be co-ordinated from Minneapolis and Paris respectively".

Carlson, one of the largest privately-owned groups in the US, is seen in the travel industry as run with a firm hand from its Minneapolis headquarters.

Wagonlit was founded in 1972 to provide sleeping cars for overnight travellers on European trains. In 1928 it set up travel agencies in rail ticket offices throughout Europe.

For over 60 years, Wagonlit had an alliance with Thomas Cook. The thinking behind the tie was that Thomas Cook's strength in the old British Empire would complement Wagonlit's power in continental Europe. The link was dissolved in 1988.

In a pointed statement yesterday, Mr Christopher Rodriguez, Thomas Cook's chief executive, said: "Since we decided to sever our relationship with Wagonlit, we have

been building the Thomas Cook network by working with like-minded partners who put customer service first. Forming alliances is only the beginning of the relationship and major industry players such as ourselves will be watching the progress of this alliance with interest. However, it will be customers who will judge its real value."

Not all Wagonlit's customers see merit in the merger or in the idea that companies need a single business to handle their travel requirements worldwide.

Mr Lamb says Fosco does not even have the same travel agency as Burmah Castrol, its parent company, which uses Thomas Cook. Fosco was already using Wagonlit when it was acquired by Burmah Castrol in 1990. Although the com-

pany asks different agencies to bid for its travel account every two or three years, it has seen no need to abandon Wagonlit, which has two staff members based at Fosco's premises.

Mr Lamb says that Fosco and Burmah Castrol did decide jointly to seek discounts from airlines as their larger combined purchasing power enabled them to get a better deal. They have investigated using a single travel agency throughout the group, but decided there were no similar savings to be made. The larger combined purchasing power would not have yielded bigger discounts.

Mr Lamb believes there are advantages to having two travel agencies working for different parts of his group. He says: "We believe it keeps both of them on their toes."

Mr Lamb is sceptical of the claim that combining Wagonlit with Carlson will enable the combined group to deliver a more competitive service. He says: "My answer to that is: if getting much bigger means you can purchase so much more efficiently, kindly tell us how much that's going to benefit us in discounts."

The proposed merger does have its champions, however. Mr Andrew Solum, travel manager of Innarsat, the international satellite organisation, which is also a Wagonlit customer, says it should bring significant benefits.

After taking on Wagonlit last year to handle travel arrangements from its London headquarters, Mr Solum was sufficiently impressed to ask them to do the same for Innarsat's offices in Princeton, New Jersey. Six weeks ago, the organisation opened an office in Beijing, where Wagonlit is not represented. Mr Solum hopes the planned merger will enable Carlson Wagonlit Travel to open an office there.

He says the idea of a global travel agency network is more than mere hype. If his organisation's employees are bumped off flights in different parts of the world, he says a call from Wagonlit to the airline often gets them back on the aircraft. The wider a travel agency network's reach, the more places there are where it can perform such services.

He says: "Wherever you are in the world, if you've got a Wagonlit ticket, you can go into a local office if you've got a problem. You've got somewhere to go if you've been robbed."

LETTERS TO THE EDITOR

Number One Southwark Bridge, London SE1 9HL

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Appearance is not everything

From Mr Derek C Jenkins.
Sir, Colin Amery ("A lifeline for the South Bank", March 14) falls into the trap which catches so many of those who write about architecture - he assumes that external appearance is everything. In praising the Festival Hall, while damning the Queen Elizabeth Hall and Hayward Gallery, he takes no account of the ability of each building to fulfil its true function successfully.

In the ways in which a concert hall can enhance a musical performance and its enjoyment, by the musicians and audience, the RFH is the worst venue not just in London, but in all the main centres in Europe. The QEH, on the other hand, ranks with the Wigmore as the best in this respect.

Among galleries, the Hayward exhibition space complements 20th century works in a way that is matched by no other venue in London, and suggests that buildings do not fulfil their real purpose superbly, merely because a vocal section of opinion deems them to be ugly on the outside, is a very poor application of values and priorities.

Derek C Jenkins
41 Spike Court,
Ather Way,
London E1 9JD

Heading down unhealthy path

From Mr Alan Beth MP.
Sir, Allison Smith's report, "Building societies aim to shake off shackles" (March 10), underlines the hostility of some building society executives to any form of accountability to their members, whose capital they manage.

When I raised this issue of accountability in a speech to the Building Societies Association a few months ago, I received an intriguing mixture of public criticism and private support. The leading article in

Mortgage Finance Gazette asserted in reply that society boards and the Building Societies Commission should take active steps to prevent the election of directors of people not chosen by the current directors, and questioned "whether mutualism meant anything more than not being required to pay shareholders dividends".

The government even suggests that building societies, which constantly mail advertising material to their mem-

bers, should be relieved of the burden of notifying them by post of their voting rights at the annual general meeting. Some people in the industry do recognise that a complete absence of accountability, even if regulation became more effective, would be extremely unhealthy. However, that is the way things are heading.

Alan Beth
Member, Democratic deputy leader and Treasury spokesman,
House of Commons,
London SW1A 0AA

Why Wales resists change

From Josephine Farrington.
Sir, I read with interest Philip Stephens' article, "WPM urged to shelve radical plans" (March 14), on growing pressure for the government to delay implementing local government reorganisation in England until after the next general election. I hope the same "consolidators" to whom the referendum was also pressed, the prime minister to drop the unpopular proposals for changing Welsh local government.

Only one in five in the principality supports the government's plans to establish 21 so-called unitary authorities at a cost of £201m. If the people of Wales, members of the Confederation of British Industry, Trades Union Congress, volun-

tary organisations and the overwhelming majority of Welsh MPs oppose this proposal, how can English MPs justify forcing it on them? They could not have sent a clearer message to Whitehall. For a government that claims to want to listen to the people, it is certainly keen to ignore the wishes of the Welsh. They have not been given an independent commission to examine council structure.

We can only hope the same ministers now making such pragmatic noises about reforming English local government will speak up for Wales.

Josephine Farrington,
Eaton House,
65a Eaton Square,
London SW1W 9BH

Scottish salmon competitive

From Mr Jim Payne.
Sir, In this letter "Scottish salmon also subsidised" (March 14), Mr Roderick Thomas wildly exaggerates the level of support which has been received by the Scottish salmon farming industry. Moreover, in every case, any support for the industry has been completely in accordance with European Union rules.

Contrary to what he states, Norway has no natural advantages over Scotland for growing salmon. This is why the performance of Scottish farms is now as good, or possibly better, than those in Norway.

There is no truth in the statement that Norwegian salmon farms are profitable at a price of 20 per cent to 30 per cent lower than the cost of production in Scotland. The most careful analysis reveals that costs of production are roughly comparable in both countries.

Mr Thomas is also wrong about the threat from Chile. Chile can compete only in Europe on frozen salmon. The freight cost for fresh salmon from Chile to Europe makes that business uneconomic. Otherwise, of course, there would be fresh salmon arriving in Europe now, at a time when the Chileans are vigorously searching for new markets.

Jim Payne,
chairman,
Scottish Salmon Growers Association,
Drummond House,
Scott Street,
Perth PH1 5E1

Time for minister to speed up the search

From Mr J M L Stone.
Sir, Mr John Gummer, the environment secretary, has called for councils to handle standard enquiries "within 10 working days" ("Quicker land searches urged", March 12).

In the last years of the 20th century this is an absurd call. Mr Gummer should seek to ensure, as a matter of urgency, that the whole of the conveyancing process should become a real-time screen-to-screen process. The hardware, the software and the technical know-how to effect this are all immediately available to his department. At a stroke, conveyancing could, if the will

were there, become a fast, efficient and cheap process which would benefit 99 per cent of the nation at the expense of 1 per cent (the lawyers).

J M L Stone,
chairman,
Property Intelligence,
13-15 John Adam Street,
London WC2N 6LD

Not a recent change in English company law

From Mr E A Coleman.
Sir, Mr Jean Thibaud's article on recent developments in French banking and company law was most informative (Business and the Law: "Overthrow of ancien régime", March 8).

Allow me, however, to correct what appears to be an inaccuracy in the article. Mr Thibaud states, in the fourth paragraph, that "England has recently accepted netting [i.e. set-off] as a basic principle of insolvency law...". In point of fact, bankruptcy/insolvency set-off has been the rule in England since the time of Queen Anne (see s.11 of 485 Anne c.17), if not before (see s.2 of the 1570 statute, 13 Elizabeth c.7).

Perhaps Mr Thibaud's refer-

I have a conventional exterior and a RADICAL interior.

Sir Michael Bishop - Chairman of British Midland
Co-ordinator since 1965

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Wednesday March 16 1994

Summit for good jobs

The jobs summit in Detroit was never likely to come up with exciting new solutions. What it could do was register agreement on the importance of the topic and indicate the nature of the emerging consensus on what to do about it.

This summit has done, in breaking new ground for the discussions among the group of seven industrial countries, it may even have given that intellectually moribund body new life.

Not that the G7's familiar macroeconomic dissonance was entirely absent. One of the recurring leitmotifs of its two decades has been the US effort to persuade the Germans to adopt more expansionary policies. The jobs summit was partly an imaginative new way to achieve that old objective.

The pitch adopted by US labour secretary, Robert Reich, was that "cyclical unemployment which persists may turn into structural or classical types of unemployment, which are more difficult to address". The argument is correct, but it cuts two ways. Rising inflation must also be avoided, because it leads to recession as surely as night follows day. It is not clear that the Clinton administration understands this point.

If a transatlantic consensus on macroeconomic policy is lacking, the agreement elsewhere was encouraging. The summit has, for example, rejected protection against imports and embraced innovation, rightly so, in both cases. Labour intensive imports and new technology will make industrial countries richer. But, as Mr Reich observes, they also exact a price. "The primary structural labour market problem," he notes, "is a shift in relative labour demand against less-educated workers and those doing routine tasks and towards workers with problem solving skills."

Increased inequality
In the US, the result has been increased inequality, with workers in the higher earnings bracket enjoying a 4.4 per cent increase in real wages over the past 20 years, while those on the bottom suffered a 10.3 per cent real decline. Because there was no overall real wage growth, US employment also grew by some 40 per cent. In continental Europe, by contrast, average real wages grew rapidly over the past two decades - by 76 per

Better fewer but better
There is growing concern at Westminster over the way that legislation is drafted and passed. On Monday, Mr Howard Davies, director general of the Confederation of British Industry, added the voice of the business community to such worries. In a speech at the European Policy Forum, he called for an overhaul of the legislative process, with more consultation, better drafting and improved scrutiny.

The case for reform is strong. The weight of legislation is growing - this year's Finance Bill, at 471 pages, is the longest in history. Yet an increasing amount of time is spent on remedying the defects of recent legislation. Last year's Criminal Justice Act repealed sentencing reforms introduced in the 1991 Act. A one-clause bill is needed to restore the powers of transport police, inadvertently watered down in last year's rail privatisation act.

A telling indicator of the need for change is the growing number of amendments to legislation introduced in the Lords. These have more than doubled during the 1990s according to evidence submitted by Lord Howe to the Hansard Society commission on the legislative process which reported last year. The late drafting and tabling of amendments inevitably makes parliamentary scrutiny less thorough. It also makes it harder for business and other organisations to make an informed contribution towards shaping legislation.

Drafting quality
Some of the blame for this has been laid at the door of the parliamentary counsel who draft legislation. The European Policy Forum has recently suggested breaking their monopoly to improve the quality of drafting. Involving outside lawyers in the work would allow departments access to a larger pool of talent. Contracting out would also force departments to define their objectives clearly and devise reasonable timetables for legal review work.

However, it is not bad drafting which has led to repeated amendments to the Police and Magistrates Courts Bill currently passing through the Lords. It is the failure of the home secretary Mr Michael Howard to convince peers

cent in France and 43 per cent in Germany. There was also very little increase in pay inequality. But these countries enjoyed virtually no employment growth, while unemployment rose, cycle by cycle.

The question then is not whether jobs can be created. It is obvious that they can be. The question is whether those new jobs can be combined with sustained rises in average real wages and the pay equality to which Europeans, in particular, are attached. The challenge is not just more jobs; it is "good jobs" for everyone.

Holy grail

Secretary Reich's own suggested solution is the trio of European-style education and training, US-style labour market flexibility and expansionary macroeconomic policy. So is this the holy grail for jobs? Only up to a point, Mr Reich. Yes, education and training matter, but high-quality basic education matters most, a policy that may never work for all and certainly will not act quickly. Yes, labour market flexibility is essential, but this is a euphemism for policies that will lower the relative real wage of the unskilled, precisely what Europeans - and increasingly Americans - find objectionable. And yes, macroeconomic policy must accommodate growth, but even Pauline Ryan, European commissioner for employment, agrees that there is a new conventional wisdom that cyclical recovery will not be the way out.

There is room for a great deal of imaginative new thinking of the kind contained in a new pamphlet from the London-based think-tank Demos on "the end of unemployment". But at the heart of that thinking must be ways to lower the cost of hiring new employees. If at the same time rewards are to be sustained, large employment subsidies for the unskilled will be required, instead of the taxes often imposed upon them. But that would necessitate higher taxes elsewhere. Combined with subsidies for training and radical labour market deregulation, this is the only policy likely to put industrial countries on the path they are apparently seeking.

Ministerial machismo
Too much legislation is rushed through parliament too hastily, in some cases, this is to deal with political crises such as a surge in joy-riding or a spate of attacks by dangerous dogs. But in most cases, it is ministerial machismo which sees pushing through radical reforms as the best way to climb the greasy pole. Frequent ministerial reshuffles encourage this belief, since ministers move on before the trouble they have created manifests itself.

A more serious approach to consultation on contentious changes in the law would help counter such tendencies. Mr Davies says that some departments consult business in "an unsatisfactory or perfunctory way". He cites the Home Office failure to consult on fire safety regulations, scrapped only after direct intervention by the CBI. And just three weeks were initially given for comments on complex proposals to reform pensions law issued in January. Ministers should give adequate time for consultation and report more fully on the outcome.

Another useful step would be to limit the number of contentious pieces of legislation passed in each session. This would allow more time for legislative "housekeeping", such as legal reforms drafted by the Law Commission. Uncontroversial measures needed by business such as amendments to the Sale of Goods Act, legislation on the Privacy of Contract and a new Restrictive Practices Bill have all been ready for years but denied parliamentary time.

There are other measures that could improve the legislative process, such as creating two finance bills to separate technical tax changes from more radical policy changes. But the key to better legislation is have less of it, and do it better.

International Computers, the UK-based computer company, used to epitomise arrogance and insularity. Even "International" in the company's name begged an invidious comparison with International Business Machines, the world's largest computer company.

Stories of its conceit abounded. The chief salesman for a region, it was said, would put up in the best hotel and announce he would be available that evening in the parlour to take customers' orders for computers.

Since its acquisition, first by the UK telecommunications company STC in 1984 and then by Fujitsu, Japan's leading computer maker, in 1990, that arrogance has evaporated. "Today we are humbler and nimbler," says Mr Peter Bonfield, ICL chairman and chief executive.

Mr Koshiro "Kit" Kitazato, Fujitsu's man in ICL's headquarters in Putney, west London, is charged with co-ordination between the Japanese computer giant and its UK-based subsidiary. He says ICL has learnt reliability from Fujitsu, while Fujitsu has learnt flexibility from ICL.

Fujitsu set several strategic objectives at the time of the takeover. ICL would be autonomous, operating at arm's length from its parent. It would retain its European base, seek maximum commercial co-operation with Fujitsu and eventually, float on the London Stock Exchange.

The first few conditions have been fulfilled; the recession has delayed the flotation. Both companies agree they should work more closely together to share research and development, and marketing costs.

There have been some positive developments: ICL's new mid-range computers are the first to be sold under the two companies' names; a pioneering trainee exchange scheme is under way; the two groups are collaborating on check-out systems for supermarkets; ICL's office software has been rewritten to be marketed in Japan.

Despite these achievements, ICL's 1993 results, scheduled for release today, will not be exciting. Turnover will be higher than last year's £2.5bn, but pre-tax profits are expected to be well below the £38.6m recorded for 1992. Profitability has been on the slide since 1989, when ICL made £14.6m before tax. The 1993 figure represents little more than break-even, though it is respectable in an industry undergoing global restructuring.

ICL's top management is taking steps to safeguard the group's profitability. Earlier this year, the company raised £100m through a rights issue wholly taken up by Fujitsu - the first time the UK company had turned to its parent for funds.

More flexible, and less arrogant friend

Alan Cane examines the outlook for a UK-based computer company in a cut-throat marketplace

ICL: nimbler and humbler



The issue reflects the group's pessimism over short-term prospects in the computer marketplace, as the industry moves towards low-cost, low-margin operating systems based on common standards.

Cash is one bulwark against a highly competitive market, an increasingly efficient and lean operation is another. Mr Bonfield points to the steady decline in the group's overheads. In 1987 operating expenses as a percentage of turnover were 25.8 per cent; in 1992 the figure was 22.9 per cent and it is expected to have fallen further in 1993. The company employs about 25,000 and is cutting jobs at about 5 per cent a year.

The reason for ICL's drive for economies is the relentless decline in gross profit margin. Standing at 47 per cent in 1987, it is now less than 35 per cent as the shift to lower-cost systems continues.

Nevertheless, ICL remains the only consistently profitable broad-based computer manufacturer headquartered in Europe; worldwide, it is one of the few traditional computer companies not floundering in red ink. By comparison, Siemens

Nixdorf of Germany and Olivetti of Italy are losing money; and Groupe Bull of France is dependent on repeated restructuring grants from the French government.

Mr Bonfield's reputation is high, both with Fujitsu and the industry at large. He was recently asked by Mr Martin Bangemann, European Union commissioner for industry and telecommunications, to join the High Level Group on Information Technology, set up to consider the impact of information technology on Europe. This is an indication that ICL has restored its Euro credentials after being humiliated out of high-level European policy meetings following the Fujitsu takeover.

But restoring adequate profitability has proved more difficult. Though it still manufactures mainframe computers, more than 50 per cent of ICL's revenues come from the services sector. Competitors now include services companies, such as Electronic Data Systems (EDS), and personal computer makers, such as Compaq, as well as its traditional rivals, IBM, Unisys and Digital Equipment.

According to Input, a US consul-

tancy which tracks the computing services business, ICL's improvement in market share in services ranks it fourth in Europe behind the US companies Microsoft, Andersen Consulting and EDS.

The company has been split into 26 semi-autonomous businesses, each with profit and loss responsibilities. There are three groups:

- industry systems, including countries such as France and Portugal, under Mr Richard Livesey-Haworth;

- services, including Workplace Technologies and Sorbus Europe, the maintenance company ICL owns with Bell Atlantic, under Mr Paul Whitman;

- and technology businesses, exemplified by Design to Distribution, ICL's manufacturing consultancy, under Mr Nialan Eadie.

These changes, made over the past year, are evidence that the company is going through a second significant restructuring. The first took place more than a decade ago when, under Mr Robb Wilford, ICL forged a technological alliance with Fujitsu and pioneered the shift to standard systems. That was when

ICL abandoned cherished notions of setting the technological agenda and accepted that it would have to buy its technology from the best sources. Despite what many saw as the dead hand of STC, ICL prospered during the buoyant economy of the late 1980s.

Both ICL and STC were aware, however, that the company needed an owner with deeper pockets and greater commitment to the information technology business than STC. The solution proved to be Fujitsu. It bought the company just before the US and western Europe moved into recession. At the same time, the cost of computer hardware fell precipitously, helped by a fierce price war between personal computer manufacturers.

ICL's survival is a consequence of a flexibility uncommon in large companies: "In storms we are quite quick up the rigging, even if the planks are leaking," Mr Livesey-Haworth says wryly.

Much of this flexibility comes from a trio of acquisitions: Datachecker, a US retail automation company which is the cornerstone of ICL's ambitions as a global retail systems company; Nokin Data, the Finnish personal computer company, which ICL bought in 1992; and Technology, the UK's largest personal computer distributor.

Datachecker, as ICL's senior managers recall, was a case study in how not to manage an acquisition. The company sent in its own manager and accountants who ran rough-shod over local management.

Sensitivities were bruised, so the assimilation took longer and cost more than envisaged.

When ICL acquired Nokin Data, it was determined not to make the same mistake. PC operations were consolidated in Scandinavia. The chief impact, however, was cultural, a pattern repeated with the acquisition of Technology. "We needed a shot of the faster-moving PC culture," Mr Eadie says.

So what is ICL's future? It is likely to remain medium sized; it is unlikely to make more money this year than in 1993, as Mr Bonfield sees no improvement in the market. He believes, however, that ICL's reorganisation will be complete this year. Largely freed from debt through the rights issue and from restructuring charges, the company should return to significant profitability in 1995, he predicts. This could mean profits eventually reaching 5 to 6 per cent of revenues.

The worry now is not complacency, but battle fatigue: "We drive this company hard, but it's the only way to do it," Mr Bonfield says. Mr Todd agrees: "We have gone through world war three, but we cannot relax. The fight goes on."

Time for the new Italy to take power



PERSONAL VIEW

Economic growth and competitiveness are the world's dominant political themes today. In North America and Asia, the main concern of government and business is how to achieve a strong position in the global economy. Ideology has been abandoned in favour of a pragmatic search for the quickest, surest way to boost competitiveness and growth, and to turn the prospect of a new cycle of international economic growth into reality.

In Europe, on the other hand, the break with the past is not so clear-cut. Political attention seems to focus on the past rather than the future; on defence rather than attack; on rejuvenating the old rather than creating the new. The result is yet another year of missed business opportunities for Europe, and rising unemployment to socially unacceptable levels.

This contradiction is even more evident in Italy. Here, political debate has either failed to take account of the future now emerg-

ing, or it is confined to impromptu, demagogic assertions that ignore the global competition Italy should be preparing to meet, if it wishes to avoid being excluded from the ranks of industrialised nations.

Now, in the run-up to an election that will be decisive for the country's future, the electoral scene is far from inspiring.

On March 27 and 28, Italians go to the polls under a new electoral system: the outcome of a referendum which vetoed the intolerable regime of corruption and inefficiency generated by the lack of alternatives to the dominant political system. For months, debate centred on how to create an electoral system that would permit alternation between a progressive pole and a conservative pole, enabling Italy to stand alongside the great western democracies.

But partly because the new electoral law was the reluctant product of a parliament forced to act by the result of the referendum, the elections will take place in a climate dominated by three main factors:

- First, the reality of transformation: to a great extent these elections are in the hands of the off-

spring of the old political system, of whom the most brazen representative is the standard-bearer of Forza Italia, together with the embalmers of certain areas of the left.

- Second, the risk to economic self-sufficiency: a real risk which lies beneath the wonder cures promised by the right, or the sermons of the outdated apologists of the left.

- Third, confusion: the contest is riddled with left-over ideologies

Behind all the manoeuvrings of the politicians there is a country which has decided to move on

which have been disinterred for the occasion.

Such suicidal behaviour may not be surprising coming from the new right, but it is alarming when it appears among the more serious elements of the centre and the left.

What politicians should be doing is explaining to the electorate that Italy is not the centre of the world,

or even of Europe; and that if we want to remain at the forefront of world markets, we have to identify our competitive advantages and abandon rear-guard actions and verbal wars.

Behind all the manoeuvrings of the politicians, old and new, in this vital election, there is a country which has decided to move on: this is the real Italy. The country has grown. You need look no further than today's great moral clean-up which, in its pursuit of a whole generation of corrupt politicians, has reached a scale unparalleled in any other country.

Or the spirit of sacrifice displayed by countless citizens in the face of an often chaotic, punitive fiscal system and an inefficient, oppressive public sector.

Or the vigour and innovative capacity of an entrepreneurial class that has reasserted its competitiveness despite the constraints under which it operates. The remarkable improvement in the trade balance in 1993 from £4,000bn to £5,000bn was not due entirely to devaluation.

This Italy must be represented politically by dignified action and

thought. The growing interest in its financial markets demonstrates that Italy's international image is changing. And foreign observers' view of the new Italy is far more accurate than the picture created by the election campaign.

Italy cannot afford to forego the chance to take part in a new cycle of growth in an ever more interconnected world. This will require rational decisions, calculated sacrifices and an acceptable balance between recovery and growth. It means social consensus and a government capable of plotting an intelligent, pragmatic and credible course.

There is no room here for slogans and miracle makers. In today's world, non-alignment with other nations means economic and social decline, with the risk of losing the basic values of democracy and freedom.

This is the "Italian risk" two weeks before the elections.

Carlo De Benedetti

The author is chairman of Olivetti

Nails out at Birmingham

■ Masochistic voyeurs have enjoyed watching Birmingham's local government draw up a list of candidates to replace on the bed of nails marked chief executive; the present incumbent, Roger Taylor, has decided to go early.

Why should intelligent bureaucrats step in between the warring factions of council departments and combative councillors? It has to be the eighth deadly sin: ambition. Birmingham is England's largest metropolitan authority.

The council is silent over who wants the £90,000 a year job, but word is that among the 10 names in the frame are two women - Sheffield's Pamela Gordon and Southwark's Anna Wyatt. There is thus the intriguing possibility of a female alliance emerging. Theresa Stewart, the current Labour leader, faces difficult elections in May. Does she favour either Gordon or Wyatt? The last woman chief executive in the West Midlands - at Sandwell - eventually decamped for New Zealand. Must be something in the water...

Removal time

■ Sounds of merchant banks on the move in the City of London.

No sooner had BZW, Barclays' international investment bank, been given the green light to move to its parent's soon-to-be-vacated Royal Mint Court headquarters, than word reaches Observer that Barings, the City's oldest merchant bank, is also fitting.

Barings, which has been at 8 Bishopsgate since 1807, is coy about its future movements. However, it is clear that if it goes through with its plan to combine its merchant bank and fast-growing securities business under one roof there is not going to be enough room for everybody at 8 Bishopsgate.

The obvious choice is for Barings to regroup at Barings Securities' vulgar America Square headquarters near the Tower of London.

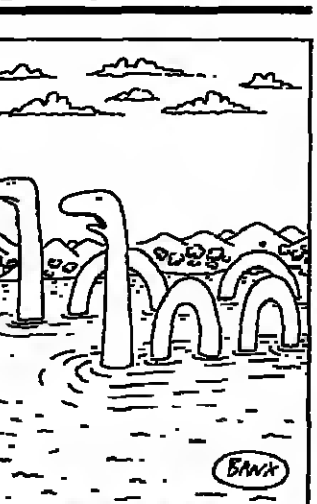
But that would mean Barings giving up its precious EC3 postcode, which it shares with the Bank of England and other pukka members of the British banking community. No doubt the young turks now running Barings couldn't care less about their postcode.

But there are still some customers who worry about such things.

Zebra crossed

■ Not everyone hates Britain's motorway cones. Footballers like to use them to practice their dribbling. Indeed, Newcastle United has

OBSERVER



"I suppose being labelled a fake is preferable to being in a sex scandal"

become so attached to the cones at its Durham training ground that it has just had them kitted out in the club's colours.

Apparently, the Department of Transport's regulation red and white strip for its motorway cones is identical to the colours of United's rivals - Sunderland.

So United's manager Kevin Keegan turned to club vice-president, Tom Brown, for help. When Brown is not watching North, he's chairman of Northumberland-based RTM Group, which supplies cones and contra-flow cylinders for motorway contractors.

No sooner had Keegan blown the whistle than Brown had paid £1,000 to have his team's 50 red and white cones recovered in different colours so they wouldn't clash with United's black and white team strip.

Reptile house

■ Who says that members of the European parliament don't have a sense of humour?

Take Johanna-Christina Grund, a German Euro-MP. She has floated the notion that, given the high annual rent for the new parliamentary debating chamber - £cu100m annually for 27 years - visitors should be charged an entry fee.

She says it should "be at a similar level for national museums, zoos, etc in Belgium". MEPs might occasionally be mistaken for stuffed exhibits and sometimes behave like animals; but really, let's have a pan-European aggregate rate, please.

Scandal fiasco

■ When does the Whitewater brouhaha turn into a scandal? The resignation of Webster Hubbell, the US associate attorney general and US presidential buddy, raises a question which is vexing careful newspaper editors.

Up to yesterday, Observer's electronic database showed a total

of 347 references to Bill and Hillary's Whitewater problems. There were 178 mentions of "scandal" and just 111 "affairs". Poor old uproar, fiasco, furor, hemish and slur don't warrant a mention; fuss gets just one.

Of course statistics are no guide to anything. With the tally to date standing at one suicide and two resignations, the verdict of one ex-member of President Bush's administration is: "Right now it's an affair. Four more resignations, then it's a scandal."

Rapid progress

■ Whether or not Whitewater is more than an affair, it has clearly gripped the imagination of London's stockbrokers. In less than a week various bits of Warburtons, James Capel and UBS have sent out research with the same heading - Whitewater Rafting.

Hey guys, let's show a hit more creativity, in an effort to raise the standard of headline writing among City stockbrokers, Observer is offering a bottle of the finest malt for the most original Whitewater headline on a piece of published research.

Strafed

■ What's the difference between Nato and the IRA? The IRA knows how to enforce a no-fly zone.

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FINANCIAL TIMES

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Mandela sends Zulus a warning on 'toy tyrants'

Patti Waldmeir sees ANC chief triumph in Mmabatho

Mr Nelson Mandela, leader of the African National Congress, yesterday made a triumphal entry to the Bophuthatswana capital Mmabatho, congratulating the people of the black "homeland" for ousting President Lucas Mangope, and issuing a veiled warning that the same might happen to Zulu Chief Mangosuthu Buthelezi.

Some 40,000 people cheered wildly as Mr Mandela entered the futuristic Independence Stadium built to commemorate Bophuthatswana's granting of independence from South Africa in 1977, a sovereignty which only Pretoria recognises.

He had harsh words for Chief Buthelezi, leader of the KwaZulu black homeland, saying last week's events in Bophuthatswana would "send a signal" to him and to the white right wing. "The people have risen and tyrants have fallen. This message will not be lost on people living under other tyrants in this country," he said. The comment bordered on a direct invitation to the people of KwaZulu to revolt.

Mr Mandela's remarks will not

improve the political climate in Natal, where at least nine people were killed yesterday in fighting between supporters of the ANC and Chief Buthelezi's Zulu-based Inkatha Freedom party.

Nor do they improve prospects for the success of talks later this week between Mr Mandela and Zulu King Goodwill Zwelithini, aimed at ensuring Inkatha's participation in the first all-race elections in April. The king has strong links to Inkatha through Chief Buthelezi, who is chief adviser to the monarchy.

Mr Mandela denigrated the threat from Inkatha, saying he would suffer "no sleepless nights" over its promise to disrupt elections. The right wing, and by implication Inkatha, were "no more than those who bark without being able to bite," he said.

ANC leaders, who previously expressed grave concern at the right's potential to disrupt elections, have gained confidence since armed rightwing whites were chased out of Bophuthatswana on Friday. This new confidence is likely to undermine the

ANC's commitment to bring Inkatha, the only remaining party boycotting the poll, into a constitutional settlement.

Mr Mandela arrived in Mmabatho yesterday morning to a low-key reception in the streets. Later in the day the largest crowd ever for a public event in Bophuthatswana turned out at the Independence Stadium, but it remained about a third empty.

The stadium is widely seen as a symbol of President Mangope's rule.

Mr Mandela condemned the looting which destroyed Mmabatho's shopping district, but ANC officials made clear to business people that an ANC government would not compensate them for what the officials implied was a necessary part of the liberation struggle.

However, Indian business people, many of whom lost all their stock, turned out to greet and garland the ANC leader. One Asian businessman said: "The Indian community are jumping on the bandwagon. They used to support Mangope, now they support Mandela."

Fast US growth puts spotlight on rates

By Michael Prowse
in Washington

The US economy is continuing to expand rapidly, according to figures released yesterday, increasing the chances of another rise in short-term interest rates.

The Federal Reserve said industrial production rose an unexpectedly large 0.4 per cent in February, after a 0.5 per cent gain in January. Most analysts had expected production to be flat or down as a result of the severe weather last month.

The figures suggest that industrial output is growing at an annual rate of 7.4 per cent in the first quarter.

That indicates little slowdown in economic growth from the second half of last year, when gross domestic product grew at an annual rate of more than 5 per cent.

The Fed also reported a sharp increase in the rate of capacity utilisation in manufacturing industry to 82.6 per cent - only fractionally below the level traditionally associated with rising inflationary pressure.

Separately, the Commerce Department said producer prices rose 0.5 per cent last month. However, the increase mainly reflected higher energy prices. "Core" producer prices - which exclude volatile food and energy - rose only 0.1 per cent, less than expected.

On Wall Street, bond prices rose in early trading as investors interpreted the encouraging core producer price figures as a sign that rapid growth was not yet putting upward pressure on inflation.

However, the strong production figures and the higher capacity utilisation rate indicate that the economy is growing faster than its long-term potential rate of growth. That raises the chance that Fed governors and regional presidents - who meet in Washington next week to discuss interest rate policy - will tighten monetary policy another notch in coming weeks.

On February 4, the Fed raised short-term rates a quarter point to 3.25 per cent - the first increase for five years. That led to a sharp increase in long bond yields, now about 6.5 per cent, on the assumption that this was the first in a series of tightening moves.

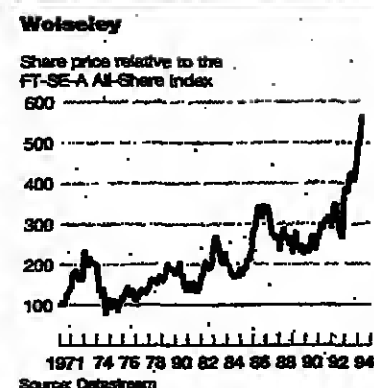
Hopes on Wall Street that economic growth would slow sharply, taking pressure off the Fed to raise rates, are evaporating. J.P. Morgan, the New York bank, is projecting economic growth at an annual rate of 6 per cent in the second quarter, after a brief weather-related slowdown to 3 per cent in the present quarter. That would be not far short of the 7.5 per cent growth rate of the final period of last year.

Recent signs of strength include a surge in production and sale of cars and light trucks, usually evidence of buoyant consumer confidence.

Wolseley builds higher

THE LEX COLUMN

FT-SE Index: 3267.4 (+37.0)



Wolseley has a habit of exceeding market expectations. Yesterday's 8 per cent rise in the shares following the release of half-year figures is a case in point. The company's reticence is partly the cause. More segmental information and an interim cash flow statement, for example, might help investors form a clearer view of what the future holds. The Stock Exchange's new disclosure guidelines are certainly no justification for clamouring up. While the going is good shareholders will doubtless forgive, but such shyness cuts both ways. Wolseley's creditable history of outperformance is punctuated by some uncomfortably sharp corrections.

Yesterday's interim statement gives no immediate cause for concern. True, Wolseley will not enjoy the conditions of the 1980s unless the housing market is stoked into another frenzy. With inflation low, neither can it count on stock profits to boost margins. But the 12 per cent increase in UK sales shows how sensitive Wolseley's distribution business is to even a modest upturn in building activity. Since profits from European distribution rose by more than 50 per cent - with presumably little cheer coming from France - the operational picture is clear.

The acquisition of Broesette in France two years ago might also provide the foundation for a wider European distribution network. If Wolseley can avoid tripping on the acquisition trail there should be growth as well as recovery to come. While the recent run-up in the shares argues for caution, that prospect leaves long-term holders with little incentive to sell.

improvement came from a squeeze on working capital, continued restraint of capital spending, which is less than half its peak in 1989, and a virtual end to spending of restructuring provisions. Williams now needs to generate cash from its basic operations. The presumption is that there will be a large beneficial effect from increased volumes once recovery gets under way.

Yet Williams still does not seem to have much scope to raise prices. Higher interest rates in the US and tax increases in the UK do not seem particularly conducive to volume growth. There may be some years of dividend restraint before Williams meets its target of two times cover. In the meantime Hanson is on a higher yield and BTR seems likely to offer faster earnings recovery.

Mirror Group

Mirror Group Newspapers is in something of a bind. Tabloid newspaper sales are in long-term decline with the Sun's price offensive sharpening the Daily Mirror's falls. MGN is therefore keen to diversify. But with low-rated shares and gearing of 73 per cent, the group is severely disadvantaged against rivals boasting cash in hand and high-priced paper. MGN's proposed alliance with Newspaper Publishing may yield some cost savings but the deal remains marginal. The ingenuity of MGN's managers in unearthing expansion opportunities will be fully tested.

At least MGN can keep profits moving by running its existing businesses more efficiently. Trading margins - excluding restructuring charges - have already risen to 24 per cent. But further gains should come from moving to Canary Wharf and improved utilisation rates at its print plants. Advertising revenue has been growing strongly as a result of some smarter newspaper supplements and the general market bounce.

Arguably, MGN has been sensible in not responding more aggressively to price wars. But the 1 per cent fall in circulation revenue suggests it is now being badly burnt by the Sun. The worry comes if the Mirror's decline endangers its advertising rate card. With such doubts in mind, one can only admire the prescience of the administrators in placing their stake last September. Having outperformed the media sector by 44 per cent in the six months before the placing, MGN has underperformed by 13 per cent in the six months since.

Williams Holdings

Slowly but surely Williams Holdings is digging itself out of the hole in which it fell after its Rascal bid failed. Full-year results show a rapid advance of operating profit in the second half thanks in large measure to a broader distribution base in the US. Cash generation is also improving with £47m left over after capital spending, interest, tax and dividend payments have been met. Just the same, in marking the shares up by a quarter since late November, the market may have become carried away. The balance sheet does not look strong enough to sustain much by way of cash acquisitions. More paper might well meet resistance, especially since dividend growth is likely to be pedestrian.

A significant part of the cash-flow

US economy

Yesterday's US producer price data confirmed the Federal Reserve's view that America does not have an inflation problem. But industrial production and capacity utilisation figures show why the bond market thinks it may be about to get one. By most calculations, the US has closed the output gap which opened during the recession. With capacity constraints now at their tightest since 1989, further growth above the long-term trend will probably stir inflation.

Growth may, however, moderate automatically - last year's fall in the savings ratio is not sustainable and the recent rise in bond yields will slow the housing market. But since most consumers will sit tight with low-cost, fixed-rate mortgages, rising yields are

Joint ventures accused of restricting competition EU to tighten telecom rules

By Lionel Barber in Brussels

The European Commission yesterday served notice that it intends to take a more active role in policing joint ventures in the fast-growing telecommunications market.

Mr Philip Lowe, head of the Commission's merger taskforce, said Brussels would look closely at industry proposals for co-operation that might restrict competition.

He told the Brussels Telecommunications Forum, a private grouping, that technology was moving so fast that it was outstripping decision makers and posing a challenge to regulators. "Frankly, we have to watch it."

Mr Lowe predicted the European Union would have to accelerate its agreed timetable for liberalising national markets for voice telephony from January 1998 - a view shared widely inside the Commission.

Mr Lowe's speech provided the first clues on future regulatory

policy in telecoms, a booming market which could see most of Europe's state companies privatised before the end of the century.

Mr Lowe suggested two areas where the competition directorate would either extend its powers or "clarify" its jurisdiction:

- Lowering the thresholds above which Brussels automatically vet deals, from Ecu250m (\$275m) annual turnover in the EU market to Ecu100m. Mr Lowe said telecom ventures usually started with a low turnover but could grow very quickly.
- Examining the definition of industrial "co-operation". Joint ventures may not amount to market concentration but they could still restrict competition, Mr Lowe suggested.

In the past year, the directorate's merger taskforce has vetted 10 cases involving telecom operators, including a British Telecom proposal to provide value added services with MCI, a US telecoms company. Overall, it

looked at 200 cases in all industrial sectors.

In one case Philips, the Dutch electronics giant, withdrew a proposed joint venture with Siemens, the German industrial company, for a big optical fibre cable project.

Mr Lowe reminded industry of the advantages of co-operating with Brussels. Takeovers of a certain size are automatically investigated within a month. Where serious doubts exist about their effect on competition, they are subject to a four-month inquiry. Separately, companies considering joint ventures or mergers can seek informal guidance.

● The Commission approved BMW's purchase of the UK car-maker Rover from British Aerospace yesterday. Also, in its first ever ruling in the newspaper publishing sector, it approved the Mirror Group-led consortium's purchase of Newspaper Publishing, which publishes the Independent and Independent on Sunday in the UK.

G7 urges IMF to let Russia have \$1.5bn

Continued from Page 1

industrial, energy and agricultural lobbies for more credits.

However, he has also tried to make clear to the IMF the severity of the crisis he faces. The draft budget - which has not yet gone to the state duma, or lower house of parliament, for the required ratification - envisages expenditure of Rb183,000bn and

income of about Rb120,000bn - leaving a budget deficit of about 10 per cent of gross national product, a figure generally regarded as tight in present circumstances.

The income, however, is already proving wildly optimistic. Government insiders said yesterday that government income, mainly from taxes, was running at only some

Rb570,000bn to Rb580,000bn a year.

Even to produce the figures he has, Mr Sergei Dubinin, the acting finance minister, sharply cut the bids of all the main ministries - limiting the military to Rb37,000bn when officers are prophesying army mutinies unless it is given Rb50,000bn, or more than 40 per cent of presently budgeted expenditure.

WEATHER GUIDE

Europe today

A cold front, separating mild air in southern Europe from cool air in northern Europe, will form over the Alps, the Balkan states and Belarus. There will be cloud and rain in the Alps, some snow to be expected above 1300 metres. South of the front, conditions will remain mild with sunny periods over the former Yugoslavia and Italy. Southern Greece, Turkey, Cyprus, Spain and Portugal will have abundant sunshine. Highest temperatures are expected in the Algarve (in excess of 25C). North of the front, cold air from the Arctic will flow into Scandinavia, Denmark, the British Isles, the Benelux, Germany and Poland. There will be frequent wintry showers, accompanied by westerly winds occasionally approaching gale force.

Five-day forecast

Conditions over the northern half of Europe will become unsettled as cold air from northern latitudes flows south. There will be snow showers and hail with thunder. It will be unseasonably cold. Conditions in southern Europe will remain settled and dry with spring-like conditions and plenty of sunshine.

TODAY'S TEMPERATURES

Location	Max	Min	Weather
Abu Dhabi	28	24	sun
Accra	28	24	sun
Algiers	22	18	sun
Amsterdam	10	8	sun
Athens	20	16	sun
B Aires	25	21	sun
B h m	11	9	sun
Bangkok	32	28	sun
Buenos Aires	18	14	sun
Calcutta	28	24	sun
Cardiff	10	8	sun
Chicago	10	8	sun
Cologne	11	9	sun
Dakar	30	26	sun
Dallas	24	20	sun
Doha	34	30	sun
Dubai	29	25	sun
Dublin	17	13	sun
Dusseldorf	17	13	sun
Edinburgh	17	13	sun
Faro	21	17	sun
Frankfurt	12	8	sun
Geneva	13	9	sun
Glasgow	12	8	sun
Hamburg	14	10	sun
Hong Kong	22	18	sun
Honolulu	26	22	sun
Istanbul	18	14	sun
Jersey	17	13	sun
Karachi	32	28	sun
Kuala Lumpur	28	24	sun
Las Palmas	20	16	sun
Lima	22	18	sun
London	11	7	sun
Luxembourg	11	7	sun
Lyon	14	10	sun
Madrid	19	15	sun
Manila	30	26	sun
Malta	13	9	sun
Manchester	13	9	sun
Mexico City	24	20	sun
Miami	28	24	sun
Moscow	15	11	sun
Munich	15	11	sun
Nairobi	28	24	sun
Naples	18	14	sun
Nassau	28	24	sun
New York	22	18	sun
Nice	27	23	sun
Nicosia	21	17	sun
Oslo	11	7	sun
Paris	12	8	sun
Perth	14	10	sun
Prague	19	15	sun
Rangoon	31	27	sun
Reykjavik	11	7	sun
Rio	28	24	sun
Riyadh	32	28	sun
Rome	19	15	sun
Sao Paulo	24	20	sun
Seoul	14	10	sun
Singapore	31	27	sun
Stockholm	14	10	sun
Strasbourg	14	10	sun
Sydney	24	20	sun
Taipei	28	24	sun
Tel Aviv	19	15	sun
Tokyo	18	14	sun
Toronto	11	7	sun
Tunis	21	17	sun
Vancouver	12	8	sun
Verona	16	12	sun
Vienna	15	11	sun
Warsaw	12	8	sun
Washington	19	15	sun
Wellington	18	14	sun
Winnipeg	10	6	sun
Zurich	12	8	sun

Situation at 12 GMT. Temperatures maximum for day. Forecasts by Meteo Consult of the Netherlands

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INTERNATIONAL COMPANIES AND FINANCE

ISS increases profits but leaves dividend unchanged

By Hilary Barnes in Copenhagen

ISS, the industrial cleaning group which plans a listing on the New York Stock Exchange this year, reported an increase in pre-tax profits to DKK583m (\$60m) in 1993 against DKK377m in 1992.

Net profits advanced to DKK482m from DKK269m, while turnover was up at DKK13.30bn from DKK11.35bn, of which 38 per cent was in the US, 35 per cent in Scandinavia and 24 per cent in Europe. Group employment increased to 125,900 from 115,000.

The group said the 17 per cent advance in turnover and 13 per cent increase in operating profits took place while

important markets such as Finland and Sweden were in recession and against a background of currency turbulence. The Swedish and Finnish currencies depreciated against the krona by around 20 per cent.

The \$83.5m acquisition of the National Cleaning Group of the US on June 1 doubled the size of the group's North American operations. An unchanged DKK10 per share dividend will be paid, but after a one-for-five subscription issue last year the total pay-out increases to DKK51.9bn from DKK43.3bn.

● The East Asiatic Company, the trading group with extensive interests in East Asia, moved back into the black with a net profit of DKK144m in

1993 compared with a loss of DKK1.18bn in 1992.

Profit after net financial items increased to DKK275m from a 1992 loss of DKK128m. Sales were up at DKK11.12bn from DKK10.29bn for the companies continuing in the group. The group has undergone major surgery over the past 18 months under a new chief executive, Mr Michael Fiorini, selling off its container line shipping services and the Plumrose food processing companies in the UK, the USA, Australia and New Zealand.

Net interest-bearing debt has been reduced to DKK2.9bn from DKK5.9bn over the past year, while return on capital improved from 3.6 in 1992 to 6.3 per cent last year.

Business travel tie-up for Carlson and Accor

By David Buchanan in Paris

Carlson Companies of the US and Accor of France are pooling their business travel operations in a joint venture, Carlson Wagonlit Travel (CWT), which they plan to develop globally for their corporate clients.

With more than 4,000 travel agencies in 125 countries providing \$10.8bn in revenue, they said the joint venture would have 8 per cent of the world business travel market, 20 per cent ahead of their nearest rival, American Express.

Through their combined purchasing power and synergies in computer reservation systems and in developing a new travel credit card, the CWT joint venture is aiming for a cheaper service for corporate clients.

The CWT joint venture will be "a real working union, not a paper partnership," claimed Mr Travis Tanner, president of Carlson Travel. However, the two parent groups will keep their respective hotel activities, and even in business travel only envisage a full merger after their joint activities are working smoothly. Essential - or just extra baggage? page 12

Banesto wins JP Morgan support

By Tom Burns in Madrid

The caretaker board of Banesto believes it has won the support of J.P. Morgan of the US for a major dilution of the troubled Spanish bank's equity as part of a rescue plan.

Backing from J.P. Morgan, which controls Banesto's biggest shareholder, would remove a doubt hanging over Banesto's AGM, scheduled for March 26, when shareholders will be asked to accept a 43 per cent write-down in the par value of Banesto shares. It

would also pave the way for the troubled bank's re-capitalisation by the domestic financial sector.

J.P. Morgan advised Mr Mario Conde, Banesto's former chairman dismissed by the Bank of Spain in December after inspectors discovered the bank had grossly over-valued its assets. J.P. Morgan engineered a large rights issue for Banesto last year and, through the Corsair Fund that it manages, had invested \$175m of US institutional funds in the Spanish bank.

A spokesman for Banesto said yesterday that although J.P. Morgan had still not delivered its support to the new board in writing there had been fruitful and fluid high-level contacts in the past weeks with the US bank. Relations with J.P. Morgan had been cool following Mr Conde's sacking.

The spokesman said there had been no contact with Mr Robert Mendoza, the J.P. Morgan vice-president who introduced the Corsair Fund to Banesto and masterminded the

rights issue. He said J.P. Morgan's office in Madrid, which had a limited role in advising Banesto's former management, had been a party to the renewed contacts.

It is believed that the Corsair Fund could make a further investment in Banesto's restructured equity base to remain a significant shareholder in the bank. Under the proposed write-down and the subsequent re-capitalisation, the Corsair's current 7.9 per cent holding in Banesto will be diluted to 4.5 per cent.

Life side boosts Royale Belge

By Gillian Tett in Brussels

Royale Belge, Belgium's largest insurance group, yesterday said that an expansion in its life insurance businesses had helped push profits up by 11 per cent last year.

Consolidated profits for 1993 were BFR4.9bn (\$91m), up from BFR4.1bn in the previous year. Turnover rose above BFR100bn for the first time, to BFR104.4bn in 1993.

The board is proposing a dividend of BFR160 a share, up

from BFR147 the previous year. Mr Jean-Pierre Gerard, chief executive, said that the improvement had been helped by the healthier financial climate and the restructuring programme which the company has implemented in the past four years.

This restructuring, which is expected to lead to a 20 per cent cut in the workforce over eight years, has divided the group into two specific operations, one of which deals with independent brokers, the

other with salaried agents.

With Royale Belge now preparing to expand into other parts of the EU insurance market, the group would be aiming for a profit increase of between 8 and 15 per cent in 1994, its board of directors said.

But although the group had seen strong results from the life insurance sector, which forms 31.4 per cent of its business in Belgium, its fire and automobile insurance sectors had recorded a loss in the previous year, the group admitted.

Wolseley shares soar on result

By David Blackwell in London

Shares in Wolseley, the world's biggest supplier of heating and plumbing equipment, soared by 69p to 971p yesterday as the UK group yet again surprised the City of London with a sharp rise in interim profits.

Pre-tax profits for the six months to January 31 rose by 83 per cent to £87m (\$127.02m) from £47.6m. Analysts had expected around £70m.

Turnover rose from £1.15bn to £1.54bn, including £92.5m from acquisitions. Lex, Page 14

MGN back in profit

By Raymond Snoddy in London

Mirror Group Newspapers, the UK newspaper group, yesterday celebrated its independence from administrators and the legacy of the late Robert Maxwell by announcing higher-than-expected pre-tax profits of £131.9m (\$182.57m).

The turnaround from a loss of £83.7m in 1992 included an exceptional gain of £58.1m, against charges of £121.2m. The group was able to release provisions of £60.8m as more money was recovered for plundered pension funds.

Sir Robert Clark, chairman, said 1993 had been "a year of

success and transformation for Mirror Group Newspapers".

Trading profits rose 19 per cent to £115.9m on turnover up 2 per cent at £476.1m for the 53 weeks to January 2. Profits before tax and exceptionals were £73.8m, against £32.5m.

Underlying earnings per share rose to 15.1p from 5.8p and the company planned to resume dividend payments.

The strengthening of MGN's balance sheet - net borrowings during the year fell from £382m to £335m - meant that the company intended to return to the banks to restructure and negotiate more medium and long-term debt. Lex, Page 14

Dana Corp buys 47% stake in Kolbenschmidt

By Christopher Parkes in Frankfurt

Dana Corporation of the US has agreed to buy a 47 per cent stake in German vehicle components maker Kolbenschmidt from the troubled Metallgesellschaft metals and engineering group.

No price was put on the deal, which is yet to be approved by cartel authorities and both companies' boards, but the agreement marks the biggest step so far in the promised sell-off at Metallgesellschaft. Dana, based in Toledo, Ohio, has annual sales of around DM8.6bn (\$4.88m).

Wolters Kluwer advances 23%

By Ronald van de Krol in Amsterdam

Wolters Kluwer, the Dutch publisher which is expanding rapidly overseas, posted a 23 per cent increase in net profit last year, with a large part of the rise due to a recent string of foreign acquisitions.

The company, which said yesterday that it expected to expand into five more European countries this year, saw net profit rise to F131.8m (\$169m) from F125.8m in 1992. Turnover grew to F12.63bn from F12.36bn, while the dividend is to be raised to F11.52 from F11.32.

The importance of recent foreign expansion is reflected by

the fact that more than half of last year's 21 per cent increase in operating profit was generated by companies acquired during 1993.

Mr Mijndert Ververs, chairman, said Wolters Kluwer, which specialises in professional, scientific and educational publishing, hoped to be able to announce deals in the Czech Republic and Hungary within the next few months.

The total spent on acquisitions in 1994 is likely to be less than the F170m spent on acquisitions and fixed-asset investment in 1993, he said. But in keeping with last year, acquisitions in 1994 would be financed from internal resources.

Wolters Kluwer's biggest acquisition last year was the takeover of Sweden's Liber Group, which fits the company's strategy of expanding in countries that are poised to become increasingly involved with the European Union. This policy also lies behind its interest in eastern Europe.

The company expects to see a further increase in 1994 results, in line with its goal of achieving an average 15 per cent increase in profit per fully diluted share in the years up to 1996. In 1996, it hopes to generate 70 per cent of its operating profit abroad, compared with 62 per cent in 1993. Turnover in 1996 is projected to increase to between F13.3bn and F13.5bn.

Norske Skog to raise Nkr800m

By Karen Fossli in Oslo

Norway's Norske Skog, one of Scandinavia's largest pulp and paper producers, is making a two-step share issue to raise around Nkr800m (\$73m).

In the first step, Nkr400m is to be raised through a 1-for-10 rights offering, with preferential rights given to existing shareholders to purchase shares of the same class. A subscription price of Nkr150 per share has been proposed.

The second step involves authorisation of the board to issue up to 2,650,000 restricted non-voting 'B' shares, aimed at international investors, to raise another Nkr400m.

"In order to broaden the company's investor base, it will be proposed that existing shareholders waive their preferential rights for the international offering," Norske Skog said.

Mr Jarle Langhaugen, a company executive, said the proceeds of the two offerings would increase financial flexibility to undertake a number of planned projects.

He said that in 1994, Norske Skog intended to build a new de-inking plant in Norway used for the treatment of waste paper. Construction is to begin later this year. At the domestic Tofte chemical pulp mill, there is a programme to gradually convert the mill to total chlorine-free pulp. Elsewhere in Norway, a new saw line is to be installed at an existing mill, while there are a number of other minor projects planned for this year.

CATHAY PACIFIC

1993 Final Results Highlights

		For the year ended 31st December		
		1993	1992	Change
Profit attributable to shareholders	US\$m	294	386	-23.8%
Shareholders' funds	US\$m	1,847	1,708	+8.2%
Earnings per share	US¢	10.3	13.5	-23.8%
Dividend per share	US¢	5.4	5.4	—

"Another difficult year"

"Prospects. 1993 was another difficult year for the air transport industry and 1994 is unlikely to show any significant improvement. However the industry is a highly cyclical one and there are indications that the second half of the decade will be stronger than the first.

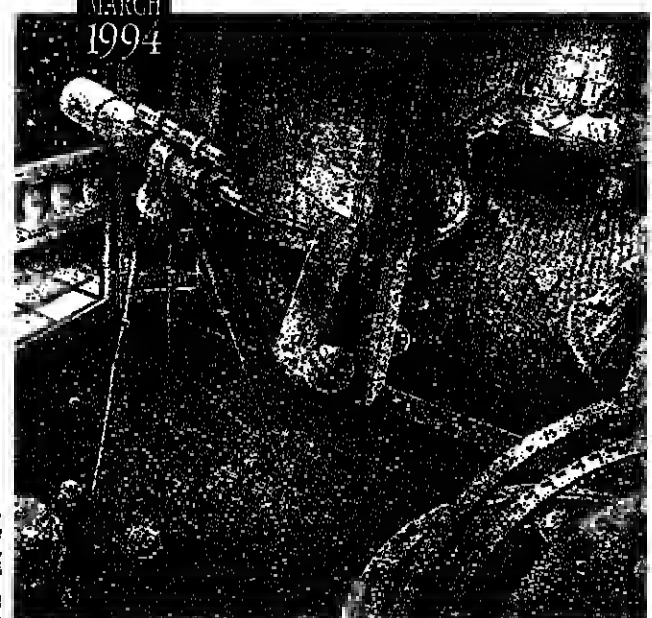
The opening of the new airport at Chek Lap Kok and economic growth in China and elsewhere in the region will arguably make Hong Kong one of the best locations in the world for an airline."

P D A Sutch
Chairman, Cathay Pacific Airways Limited
Hong Kong, 10th March 1994

Notes:
1. The United States dollar figures shown are for information only, and are translated from Hong Kong dollars at the rate of exchange of US\$1.00 = HK\$7.80.
2. Dividend is declared in Hong Kong dollars.

Swire Group

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YOUR OPTION FOR THE FUTURE

IBM chief expects a gradual recovery

By Louise Kehoe
in San Francisco

Mr Lou Gerstner, chairman and chief executive of International Business Machines, sees no quick fix for the computer company's financial woes. In the annual report to shareholders, Mr Gerstner says that IBM will recover "over time".

"It won't all happen overnight, but we are making significant progress," Mr Gerstner says in a letter addressed to "Dear Fellow Investor". He acknowledges, however, that "you wouldn't know it from looking at the financial results for the year 1993".

IBM earlier reported net losses for 1993 of \$8.1bn on revenues of \$62.7bn. In 1992 the company recorded a \$5bn loss on sales of \$64.5bn.

Mr Gerstner charges that the company "failed to keep pace with significant change in the industry". It has been too bureaucratic and too preoccupied with our own view of the world. We have been way too slow getting new things to the market," he states.

"We believe we can fix these problems because they are caused by us and not factors outside our doors," says Mr Gerstner, directly contradicting past statements by senior IBM managers who blamed IBM's problems on economic pressures and market turmoil.

Mr Gerstner, who last July stated that "the last thing IBM needs right now is a vision," now believes that "strategy is particularly important for IBM". He is expected to begin to reveal these strategies at an analysts meeting later this month.

IBM's plans, announced last July, to reduce its workforce by 35,000 by the end of 1995, are unchanged. "Based on current business conditions, we think that's about the right number," Mr Gerstner says.

Financial data revealed for the first time in the annual report point to IBM's mainframe computers as the crux of its problems. Revenue from mainframe computer hardware declined 27.6 per cent last year, to \$10bn, while personal computer sales increased 23.3 per cent to \$9.7bn.

The company's data storage products division reported a precipitous 18.2 per cent revenue decline to \$5.1bn, while services revenues rose 32 per cent to \$9.7bn.

The report also shows a sharp decline in European sales over the past year, with sales in the US and Asia Pacific regions increasing slightly.

Having outstripped the US for the previous two years, European revenues fell about 13 per cent to \$21bn last year, from almost \$24bn in 1992.

Trans World Airlines

Following our report of March 9, we wish to make it clear that Trans World Airlines, which sought protection from creditors in November 1992, came out of Chapter 11 late last year.

Brazilian mining group prospects for joint ventures

Companhia Vale do Rio Doce is seeking international partners through its ADR programme, writes Patrick McCurry

A new American Depositary Receipt programme launched by Companhia Vale do Rio Doce (CVRD), the world's largest iron ore exporter, is meant to be a first step in a plan to finance new joint ventures with foreign companies.

The basic programme, under which the company's ADRs will be traded in the US over-the-counter market, is likely to lead to a new equity offering in the US next year.

This should help fund joint ventures with foreign companies, particularly in the pulp sector. The projects will need heavy capital investment in their early stages.

Mr Anastacio Fernandes Filho, financial director, says the company embarked on the ADR programme, launched last week, to attract foreign investors, and to increase its international profile and share liquidity. Currently foreigners own about 3 per cent of the capital.

"It will be easier to issue bonds or other securities with a wider investor base," he says.

Created during the second

world war by Brazil, the US and the UK to supply the Allies with iron ore, and later taken over by the government, CVRD has always been regarded as an exception to Brazil's other federally-controlled giants.

While Brazilian governments considered areas such as telecommunications and oil production as strategically important, and took charge of key appointments, CVRD was given greater autonomy so that it could compete in international markets. As a result, its management has generally been more independent of political pressures.

Its strategy has been to exploit its huge landholdings and deposits by diversifying into other minerals, such as copper and gold. It has also moved into areas such as pulp and infrastructure.

The company's policy has usually been to grow through joint ventures with Brazilian and foreign companies, often offering exploitation rights towards the cost of the project.

These joint ventures, mainly in pulp, copper, kaolin and aluminium, have planned capital

investment of about \$1.5bn over the next five years.

"CVRD has not neglected its iron ore business, and has taken minority shares in areas where it lacks experience," says Ms Lika Takahashi, a research director with brokers Baring Securities Brazil.

Despite the company's strong natural advantages and efficient management, it has been hit by the world slump in commodity prices.

Net profits for the year to the end of December 1993 fell 12 per cent to \$262m, while net sales were down slightly to \$2.15bn. The company was also affected by increased interest costs on a yen loan at its Albras aluminium joint venture. The appreciation of the yen against the dollar contributed to a loss of nearly \$100m.

CVRD's rail and port network has now been developed to generate profits from outside users. The transport sector was its second-largest revenue source in 1993, providing 16 per cent of net sales. Iron ore and pellets still provide the majority of sales, accounting for 57 per cent last year.

Excluding the results of the



Transport was CVRD's second biggest revenue source in 1993

yen appreciation and government tax credits, profits were about \$200m, according to Ms Takahashi, who expects this figure to reach about \$450m in 1996 if commodities prices recover. Partly because of the price slump, CVRD's shares

been cut by a quarter to less than 18,000. Analysts expect continued improvements in efficiency, especially since the company won increased operational independence from the federal government, which still owns 51 per cent of shares, in 1992.

CVRD's restructuring followed a worrying pile up of debt in the late 1980s. It switched 35 per cent of its debt from the expensive and short-term local market to longer-term paper in international markets. Its current outstanding debt is about \$1.5bn, a debt-to-equity ratio of 35 per cent, according to the company.

However, very large debts in joint ventures such as the Albras aluminium project are not consolidated.

According to analysts, the company will be open to criticism while it remains government-controlled. Although CVRD's management believes privatisation is inevitable, it is beset by political difficulties and has fallen off the agenda ahead of October's presidential elections.

Sao Paulo-based mining consultant Mr Juarez Fontana dos

Santos praises CVRD as an efficient and low-cost producer. Nevertheless he says the company remains over-centralised and bound by government-imposed restrictive legislation on public tenders that slow down decisions and purchases.

However, he maintains the company is attempting to become more flexible, and that more independence may be achieved if changes are approved under a congressional review of the constitution. This is under way, but may not be completed this year.

He says the company's priorities for this year are to develop its rail transport network by forming a group to bid for the privatisation of part of the federal railway system.

It also intends to be more aggressive in its main iron ore market. Last month, CVRD cut its ore prices to Japan, its largest market, in response to discounts offered by Australian competitors. "This year we'll be more aggressive, offering quicker delivery and better quality for certain kinds of ore," says Mr Fernandes.

Avesta aims to raise SKr600m

By Hugh Carnegie
in Stockholm

Avesta Sheffield, the Swedish-British steel producer, yesterday announced a SKr600m rights issue to back a programme of investments and restructuring designed to strengthen the group further after cutting losses sharply in 1993.

The company, formed in late 1992 from a merger of Avesta with the stainless steel interests of British Steel, said losses after financial items were reduced to SKr98m (\$12.48m) last year from SKr574m in 1992. Sales were up 20 per cent to SKr14.2bn.

It said the improvement came in spite of generally

weak demand, especially for its cold rolled products, hot rolled steel plate and tubes.

The reduced losses were attributed chiefly to merger synergies, the fall in value of the Swedish and British currencies and reduced employers contributions and energy taxes in Sweden.

No dividend will be paid, as was the case last year.

In January the company secured a five-year syndicated bank loan of \$268.75m. The new financing will bolster Avesta Sheffield - 40 per cent owned by British Steel - as it implements a SKr600m investment and restructuring plan, provision for which was made in the 1993 accounts.

The plans include invest-

ment in a new continuous plate production plant in the US and the upgrading of melting shops in Sheffield and Avesta.

A melting shop in Degerfors in Sweden is to be closed down.

Avesta Sheffield said overcapacity in Europe continued to depress short and medium-term prospects for stainless steel, but stronger demand in the Far East and the US supported a forecast of long-term growth in consumption of 4-5 per cent a year.

The company's investment and restructuring plan should give a quick return by increasing productivity, reducing lead times and improving costs, it said.

Chairman of LSE makes pitch for Chinese custom

By Tony Walker in Beijing

A strong pitch for Chinese companies to choose London when seeking an overseas listing was made yesterday by Sir Andrew Hugh Smith, chairman of the London Stock Exchange.

Opening an investment seminar in Beijing, he told bankers, securities managers and stock regulators that the London market had the breadth of experience and liquidity to benefit Chinese companies seeking overseas capital.

"Companies raise more money if they issue shares on a market like London's, where there is much investor interest and liquidity," said Sir Andrew.

The invisible seminar, organised by the China-Britain Trade Group, was partly aimed at countering a trend among Chinese companies to look first at Hong Kong and New York when considering an overseas listing.

Some six mainland companies have listed in Hong Kong in the past year or so, and one of these - Shanghai Petrochemical - secured a joint listing in New York.

Another 23 Chinese companies, including a number from the power sector, are under consideration for overseas listings. Several have indicated an interest in floating their shares in London.

Sir Andrew, who will sign a memorandum of understanding with the Shanghai stock exchange to facilitate co-operation in trading and listing, said the London exchange would rationalise listing requirements to eliminate differences.

Seminar organisers said there was a good response from Chinese participants who indicated they had not been aware of the extent of business on the London market where some 200 new companies sought listings last year, raising \$38bn in equity capital.

Sotheby's well up at \$20.6m in final quarter

By Richard Tomkins
in New York

Sotheby's Holdings, the parent company of Sotheby's New York-based auction, finance and real estate operations, lifted net income to \$20.6m in the fourth quarter of 1993 from \$11.6m a year earlier on turnover of \$103.7m, against \$94.5m.

Net earnings per share rose to 36 cents a share from 21 cents.

For the full year, net income rose to \$19.5m from \$4m on turnover of \$252.5m against \$255m. Net earnings rose to 35 cents a share from 7 cents.

Auction sales for the year increased by 17 per cent to \$1.3bn. Auction operating revenues rose by \$34.1m to \$255m and auction income before taxes jumped to \$34.2m from \$4m.

It sold about 163,000 lots in 1993, up 19 per cent from the previous year's 137,000.

BTR plc

has acquired

Rexnord Corporation

The undersigned acted as financial advisor to BTR plc in this transaction.

Dillon, Read & Co. Inc.

February 1994

BTR Dunlop Holdings, Inc.

has purchased through tender

\$157,415,000

principal amount of

10 3/4% Senior Notes due 2002

of

Rexnord Corporation

The undersigned acted as dealer manager for BTR Dunlop Holdings, Inc. in this transaction.

Dillon, Read & Co. Inc.

February 1994

NOTICE OF REDEMPTION

MORTGAGE FUNDING CORPORATION NO. 1 PLC Class A-1 Mortgage Backed Floating Rate Notes Due March 2020

NOTICE IS HEREBY GIVEN TO Bankers Trust Company Limited (the "Trustee") and to the holders of the Class A-1 Mortgage Backed Floating Rate Notes Due March 2020 (the "Class A-1 Notes") of Mortgage Funding Corporation No. 1 PLC (the "Issuer") that, pursuant to the Trust Deed dated 31st March, 1988 (the "Trust Deed"), between the Issuer and the Trustee, and the Agency Agreement dated 31st March, 1988 (the "Agency Agreement"), between the Issuer and Morgan Guaranty Trust Company of New York (the "Principal Paying Agent") and others, the Issuer has determined that in accordance with the Terms and Conditions of the Class A-1 Notes, the Issuer has elected to redeem the Class A-1 Notes in the amount of £1,500,000 by the redemption date of 31st March, 1994 (the "Redemption Date") by tendering a like amount of Class A-1 Notes. The Class A-1 Notes selected by drawing in lots of £100,000 for redemption on the Redemption Date at redemption price (the "Redemption Price") equal to their principal amount, together with accrued interest thereon are as follows:

OUTSTANDING CLASS A-1 NOTES OF £100,000 EACH BEARING
THE DISTINCTIVE SERIAL NUMBERS SET OUT BELOW

Serial Numbers

116 475 535 582 697 799 995 1029 1041

1044 1081 1370 1505 1512 1580

The Class A-1 Notes may be surrendered for redemption at the specified office of any of the Paying Agents, which are as follows:

Morgan Guaranty Trust Company of New York
PO Box 161, 60 Victoria Embankment
London EC4Y 0JP

Morgan Guaranty Trust Company of New York
Avenue des Arts 35, B-1040 Brussels

Union de Banques Suisses (Luxembourg) S.A.
36-38 Grand rue
L-2011 Luxembourg

Morgan Guaranty Trust Company of New York
55 Exchange Place, Basement A
New York, New York 10260-0023
Attn: Corporate Trust Operations

In respect of Bearers Class A-1 Notes, the Redemption Price will be paid upon presentation and surrender, on or after the Redemption Date, of such Notes together with all unexpired coupons and talons appertaining thereto. Such payment will be made (i) in sterling at the specified office of the Paying Agent in London or (ii) at the specified office of any Paying Agent listed above by sterling cheque drawn on, or at the option of the holder by transfer to a sterling account maintained by the payee with, a Town Clearing branch of a bank in London. On or after the Redemption Date interest shall cease to accrue on the Class A-1 Notes which are the subject of this Notice of Redemption.

MORTGAGE FUNDING CORPORATION NO. 1 PLC By: Morgan Guaranty Trust Company as Principal Paying Agent Dated: 16th March, 1994

NOTICE

Withholding of 31% of gross redemption proceeds of any payment made within the United States is required by the Internal Revenue Code of 1986 and amended by the Energy Policy Act of 1992 unless the paying agency has the correct taxpayer identification number (social security or employer identification number) or exemption certificate of the Payee. Please furnish a properly completed Form W-9 or exemption certificate or equivalent if presenting your Class A-1 Notes to the paying agency's New York Office.

Please see accompanying statement for the purposes of the redemption notice and for the purposes of the Agency Agreement.

Lot	Serial Number	Principal	Interest	Total
0000	10,000	10,000	17,000	27,000
0100	11,000	11,000	18,000	29,000
0200	12,000	12,000	19,000	31,000
0300	13,000	13,000	20,000	33,000
0400	14,000	14,000	21,000	35,000
0500	15,000	15,000	22,000	37,000
0600	16,000	16,000	23,000	39,000
0700	17,000	17,000	24,000	41,000
0800	18,000	18,000	25,000	43,000
0900	19,000	19,000	26,000	45,000
1000	20,000	20,000	27,000	47,000
1100	21,000	21,000	28,000	49,000
1200	22,000	22,000	29,000	51,000
1300	23,000	23,000	30,000	53,000
1400	24,000	24,000	31,000	55,000
1500	25,000	25,000	32,000	57,000
1600	26,000	26,000	33,000	59,000
1700	27,000	27,000	34,000	61,000
1800	28,000	28,000	35,000	63,000
1900	29,000	29,000	36,000	65,000
2000	30,000	30,000	37,000	67,000
2100	31,000	31,000	38,000	69,000
2200	32,000	32,000	39,000	71,000
2300	33,000	33,000	40,000	73,000
2400	34,000	34,000	41,000	75,000
2500	35,000	35,000	42,000	77,000
2600	36,000	36,000	43,000	79,000
2700	37,000	37,000	44,000	81,000
2800	38,000	38,000	45,000	83,000
2900	39,000	39,000	46,000	85,000
3000	40,000	40,000	47,000	87,000
3100	41,000	41,000	48,000	89,000
3200	42,000	42,000	49,000	91,000
3300	43,000	43,000	50,000	93,000
3400	44,000	44,000	51,000	95,000
3500	45,000	45,000	52,000	97,000
3600	46,000	46,000	53,000	99,000
3700	47,000	47,000	54,000	101,000
3800	48,000	48,000	55,000	103,000
3900	49,000	49,000	56,000	105,000
4000	50,000	50,000	57,000	107,000
4100	51,000	51,000	58,000	109,000
4200	52,000	52,000	59,000	111,000
4300	53,000	53,000	60,000	113,000
4400	54,000	54,000	61,000	115,000
4500	55,000	55,000	62,000	117,000
4600	56,000	56,000	63,000	119,000
4700	57,000	57,000	64,000	121,000
4800	58,000	58,000	65,000	123,000
4900	59,000	59,000	66,000	125,000
5000	60,000	60,000	67,000	127,000
5100	61,000	61,000	68,000	129,000
5200	62,000	62,000	69,000	131,000
5300	63,000	63,000	70,000	133,000
5400	64,000	64,000	71,000	135,000
5500	65,000	65,000	72,000	137,000
5600	66,000	66,000	73,000	139,000
5700	67,000	67,000	74,000	141,000
5800	68,000	68,000	75,000	143,000
5900	69,000	69,000	76,000	145,000
6000	70,000	70,000	77,000	147,000
6100	71,000	71,000	78,000	149,000
6200	72,000	72,000	79,000	151,000
6300	73,000	73,000	80,000	153,000
6400	74,000	74,000	81,000	155,000
6500	75,000	75,000	82,000	157,000
6600	76,000	76,000	83,000	159,000
6700	77,000	77,000	84,000	161,000
6800	78,000	78,000	85,000	163,000
6900	79,000	79,000	86,000	165,000
7000	80,000	80,000	87,000	167,000
7100	81,000	81,000	88,000	169,000
7200	82,000	82,000	89,000	171,000
7300	83,000	83,000	90,000	173,000
7400	84,000	84,000	91,000	175,000
7500	85,000	85,000	92,000	177,000
7600	86,000	86,000	93,000	179,000
7700	87,000	87,000	94,000	181,000
7800	88,000	88,000	95,000	183,000
7900	89,000	89,000	96,000	185,000
8000	90,000	90,000	97,000	187,000
8100	91,000	91,000	98,000	189,000
8200	92,000	92,000	99,000	191,000
8300	93,000	93,000	100,000	193,000
8400	94,000	94,000	101,000	195,000
8500	95,000	95,000	102,000	197,000
8600	96,000	96,000	103,000	199,000
8700	97,000	97,000	104,000	201,000
8800	98,000	98,000	105,000	203,000
8900	99,000	99,000	106,000	205,000
9000	100,000	100,000	107,000	207,000
9100	101,000	101,000	108,000	209,000
9200	102,000	102,000	109,000	211,000
9300	103,000	103,000	110,000	213,000
9400	104,000	104,000	111,000	215,000
9500	105,000	105,000	112,000	217,000
9600	106,000	106,000	113,000	219,000
9700	107,000	107,000	114,000	221,000
9800	108,000	108,000	115,000	223,000
9900	109,000	109,000	116,000	225,000
10000	110,000	110,000	117,000	227,000
10100	111,000	111,000	118,000	229,000
10200	112,000	112,000	119,000	231,000
10300	113,000	113,000	120,000	233,000
10400	114,000	114,000	121,000	235,000
10500	115,000	115,000	122,000	237,000
10600	116,000	116,000	123,000	239,000
10700	117,000	117,000	124,000	241,000
10800	118,000	118,000	125,000	243,000
10900	119,000	119,000	126,000	245,000
11000	120,000	120,000	127,000	247,000
11100	121,000	121,000	128,000	249,000
11200	122,000	122,000	129,000	251,000
11300	123,000	123,000	130,000	253,000
11400	124,000	124,000	131,000	255,000
11500	125,000	125,000	132,000	257,000
11600	126,000	126,000	133,000	259,000
11700	127,000	127,000	134,000	261,000
11800	128,000	128,000	135,000	263,000
11900	129,000	129,000	136,000	265,000
12000	130,000	130,000	137,000	267,000
12100	131,000	131,000	138,000	269,000
12200	132,000	132,000	139,000	271,000
12300	133,000	133,000	140,000	273,000
12400	134,000	134,000	141,000	275,000
12500	135,000	135,000	142,000	277,000
12600	136,000	136,000	143,000	279,000
12700	137,000	137,000	144,000	281,000
12800	138,000	138,000	145,000	283,000
12900	139,000	139,000	146,000	285,000
13000	140,000	140,000	147,000	287,000
13100	141,000	141,000	148,000	289,000
13200	142,000	142,000	149,000	291,000
13300	143,000	143,000	150,000	293,000
13400	144,000	144,000	151,000	295,000
13500	145,000	145,000	152,000	297,000
13600	146,000	146,000	153,000	299,000
13700	147,000	147,000	154,000	301,000
13800	148,000	148,000	155,000	303,000
13900	149,000	149,000	156,000	305,000
14000	150,000	150,000	157,000	307,000
14100	151,000	151,000	158,000	309,000
14200	152,000	152,000	159,000	311,000
14300	153,000	153,000	160,000	313,000
14400	154,000	154,000	161,000	315,000
14500	155,000	155,000	162,000	317,000
14600	156,000	156,000	163,000	319,000
14700	157,000	157,000	164,000	321,000
14800	158,000	158,000	165,000	323,000
14900	159,000	159,000	166,000	325,000
15000	160,000	160,000	167,000	327,000
15100	161,000	161,000	168,000	329,000
15200	162,000	162,000	169,000	331,000
15300	163,000	163,000	170,000	333,000
15400	164,000	164,000	171,000	335,000
15500	165,000	165,000	172,000	337,000
15600	166,000	166,000	173,000	339,000
15700	167,000	167,000	174,000	341,000
15800	168,000	168,000	175,000	343,000
15900	169,000	169,000	176,000	345,000
16000	170,000	170,000	177,000	347,000
16100	171,000	171,000	178,000	349,000
16200	172,000	172,000	179,000	351,000
16300	173,000	173,000	180,000	353,000
16400	174,000	174,000	181,000	355,000
16500	175,000	175,000	182,000	357,000
16600	176,000	176,000	183,000	359,000
16700	177,000	177,000	184,000	361,000
16800	178,000	178,000	185,000	363,000
16900	179,000	179,000	186,000	365,000
17000	180,000	180,000	187,000	367,000
17100	181,000	181,000	188,000	369,000
17200	182,000	182,000	189,000	371,000
17300	183,000	183,000	190,000	373,000
17400	184,000	184,000	191,000	375,000
17500	185,000	185,000	192,000	377,000
17600	186,000	186,000	193,000	379,000
17700	187,000	187,000	194,000	381,000
17800	188,000	188,000	195,000	383,000
17900	189,000	189,000	196,000	385,000
18000	190,000	190,000	197,000	387,000
18100	191,000	191,000	198,000	389,000
18200	192,000	192,000	199,000	391,000
18300	193,000	193,000	200,000	393,000
18400	194,000	194,000	201,000	395,000
18500	195,000	195,000	202,000	397,000
18600	196,000	196,000	203,000	399,000
18700	197,000	197,000	204,000	401,000
18800	198,000	198,000	205,000	403,000
18900	199,000	199,000	206,000	405,000
19000	200,000	200,000	207,000	407,000
19100	201,000	201,000	208,000	409,000
19200	202,000	202,000	209,000	411,000
19300	203,000	203,000	210,000	413,000
19400	204,000	204,000	211,000	415,000
19500	205,000	205,000	212,000	417,000
19600	206,000	206,000	213,000	419,000
19700	207,000	207,000	214,000	421,000
19800	208,000	208,000	215,000	423,000
19900	209,000	209,000	216,000	425,000
20000	210,000	210,000	217,000	427,000
20100	211,000	211,000	218,000	42

INTERNATIONAL COMPANIES AND FINANCE

Earnings at Générale de Banque up 8% for year

By Gillian Tett in Brussels

Consolidated profits at Générale de Banque, Belgium's largest bank, rose by 8 per cent last year to BF11.6bn (\$333m), up from BF10.7bn in the previous 12 months.

Mr Ferdinand Chaffart, chief executive, yesterday claimed that all the branches of the bank's activities had contributed to the growth, which was broadly in line with market expectations.

However, he noted that the bank had benefited in particular from falling interest rates which had boosted financial markets and stock exchanges.

In spite of an overall drop in loans, private sector lending rose by 4.5 per cent last year. Meanwhile, gross income had risen by 14 per cent as a result of an expansion of the group's investment funds and foreign exchange activities, coupled with the realisation of capital gains on government bonds and the bank's recent sale of its stake in ABN-Amro, Mr Chaffart added.

The board of directors has proposed an increase in net dividend to BF240 from BF220. With the bank hoping to benefit further from a weak D-Mark, in spite of uncertainties about the scope for further German rate cuts, Mr Chaffart said he remained "optimistic" about the prospects for further growth next year.

Finmeccanica reduces holding

By Sara Webb

Finmeccanica, the Italian state-controlled engineering group, is further reducing its stake in its quoted subsidiary, Ansaldo Trasporti, in a transaction expected to raise up to L75bn (\$43m).

Lehman Brothers and Paribas Capital Markets were appointed joint lead managers yesterday for the placement of 10.6m ordinary shares in Ansaldo Trasporti with international investors. Finmeccanica's stake will fall to 50.1 per cent from 53.6 per cent.

The world's most profitable software company is to refocus on global marketing, writes Alan Cane
Microsoft regroups to get closer to its customers

Mr Bill Gates, co-founder and chairman of Microsoft, the world's largest personal computer software company, has announced that his company is to refocus on global marketing, writes Alan Cane.

Lotus Development Corporation developed the best selling spreadsheet 1-2-3 and market leading software for workgroups "Notes". Novell markets the most popular PC networking software.

What is striking about Microsoft's decision to reorganise is that, unlike other companies forced to restructure because of falling sales or trading losses, it remains the world's most profitable software company.

In 1993 it reported net income of \$633m on sales totaling \$3.75m.

Its success is based on a broad range of market leading software packages, but especially on MS-DOS and Win-

ows, the operating systems used by 90 per cent of the world's 100m personal computers.

Microsoft says that if it is to continue growing, it needs a fast, responsive organisation focusing on the customer's needs.

Among the changes called for in the plan are:

● Microsoft's core technologies must be shared across the company to achieve economies of scale and offer customers greater consistency.

● The company's product strategy has to be simplified. The memorandum says: "We are overloading the market with lots of complex messages. We need to develop clear themes that pull together what we say about our products."

This is taken to be a reference to confusion in the marketplace over Microsoft's

advanced Windows NT operating system and its derivatives codenamed Daytona and Cairo. Products are to be grouped in seven divisions: personal operating systems, business systems and workgroup appli-

cations, desktop applications, consumer applications, software developer systems, advanced consumer technology and on-line services.

● Sales activities will be grouped into three customer units to give greater customer focus: "We will align all worldwide sales and marketing people with one of three customer types: end users, organisations, or other equipment manufacturers. People within these customer units will live, eat and breathe with their customers," the memorandum says.

● A renewed focus on the competition: "We must understand not only competitors' products but also their sales strategies, marketing strategies, localisation strategies and so on. We must be aggressive in taking legitimate competitive actions."

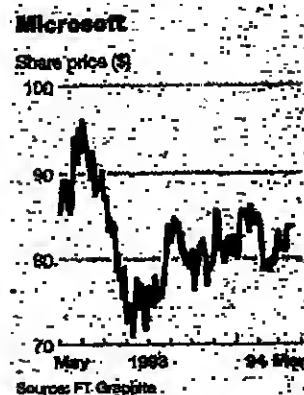
The memorandum goes on to say the company has to make decisions faster and be more efficient in marketing, sales and support. "It must be clear that it is better to take action, make mistakes and be forgiven than to wait and ask for permission."

The memorandum makes clear the company is planning on a global basis.

In the past, product marketing groups were focused primarily on the US market and subsidiaries had to develop their own marketing programmes.

"In the future we will create global marketing programmes that can be efficiently deployed in local geographies."

The company denied that subsidiaries would become less independent, arguing that it would collect information from its subsidiaries in developing global marketing strategies.



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Fannie Mae in scheme for low-income borrowers

By Patrick Harverson in New York

The Federal National Mortgage Association (Fannie Mae) yesterday launched an initiative to provide \$1,000m in mortgage financing over the next seven years to help low-income families in the US buy their own homes.

The initiative comprises a series of programmes to provide more information to potential homebuyers, making it easier for low-income or disadvantaged families to win approval for a mortgage loan, and ending racial discrimination in the lending process.

By the end of the decade, Fannie Mae hopes to have provided \$1,000m in financing to mortgage providers, and helped 10m families buy homes.

The company is the largest provider of mortgages in the US. It does not sell mortgages directly to homebuyers, but rather invests in mortgages sold by mortgage companies, savings and loan institutions and banks.

Fannie Mae said it would direct the programmes at low and moderate-income families, minority groups, new immigrants to the US, people living in inner-city areas or neglected communities, and people with special housing needs.

Stone-Consolidated, the newspaper arm of Chicago's Stone Container, halved its losses in 1993. It said prices in the US were improving and inventories declining.

The 1993 loss was \$568.7m (\$851.2m) down from \$1,100m in 1992 on sales of \$3,923m, up 10.4 per cent. Paper shipments were 1.3m tonnes, up from 1.25m. The company said costs had been reduced and strong timber prices and a lower Canadian dollar had helped.

Newsprint group halves its deficit

By Robert Gibbons in Montreal

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The 1993 loss was \$568.7m (\$851.2m) down from \$1,100m in 1992 on sales of \$3,923m, up 10.4 per cent. Paper shipments were 1.3m tonnes, up from 1.25m. The company said costs had been reduced and strong timber prices and a lower Canadian dollar had helped.

Mutual fund takeover bid lights up Wall Street

Richard Waters examines the implications of the uninvited offer from GE Capital for Kemper

The prospect of a second big takeover in the mutual fund business in the US in a matter of months lit up Wall Street yesterday. Shares in Kemper, the Chicago-based asset management, life insurance and broking company, leapt by 50 per cent, or 20%, from Monday's close on an uninvited bid from GE Capital.

The sharp move pushed Kemper's market value up to nearly \$2.5bn, above GE Capital's offer valued at \$2.2bn. It signalled Wall Street's belief that either the General Electric subsidiary would have to offer more or the approach would prompt a rare bidding war for the financial services company.

The bid approach from GE Capital follows Mellon Bank's \$1.8bn acquisition of Dreyfus, which marked the most aggressive move yet by a US commercial bank to enter the booming funds business.

The bid approach from GE Capital follows Mellon Bank's \$1.8bn acquisition of Dreyfus, which marked the most aggressive move yet by a US commercial bank to enter the booming funds business.

on expectations of further gains. Franklin Resources, for instance, rose 1%, to 46 1/4.

GE's approach came in a letter from Mr Jack Welch, chair-

man of the US group, to Mr David Matthei, his opposite number at Kemper. Although written on March 2, it was only made public by GE yesterday in an apparent move to put pressure on Kemper's board to accept the deal.

It could also be designed to force a decision before any rival suitor has a chance to make a move. The market has been rife with rumours of an approach for Kemper since the Dreyfus deal.

Banco Santander, the Spanish bank which took a 3 per cent stake in Kemper in the late-1980s, is one name frequently mentioned - although its potential involvement in a rescue bid for domestic rival Banesto could give its management more than enough to think about in the months ahead.

Other US domestic banks, seeking to emulate Mellon, are also seen as possible bidders.

GE's approach has caught Kemper's management in an unenviable position. The company is only just emerging from a period overshadowed by problem real estate investments.

Last year, Kemper sold off its reinsurance operations, and earlier this year completed its exit from the property/casualty business.

In the view of several analysts, it could be on the verge of a rebound in earnings - although its stock price before GE's approach became public seemed not to reflect this.

At around \$40, the shares earlier this week were trading on a multiple of around 12 to

US MUTUAL FUND GROUPS

Assets (end 1993)	\$bn
Fidelity	251.5
Vanguard	134.9
Merrill Lynch	124.6
Capital Research	105.1
Franklin/Templeton	94.0
Dreyfus	75.0
Federated Investors	68.5
TIAA-CREF	61.1
Putnam	60.7
Dean Witter	59.5
Smith Barney Shearson	54.4
Prudential	45.7
IDS	44.4
Kemper	37.4
Scudder	35.1

Source: Investment Company Institute

13 times most analysts' expectations of earnings this year, considerably lower than other companies in the sector.

Mr Michael Blumstein, of Morgan Stanley, estimates earnings this year of \$3.75 a share, rising to \$4.40 in 1995 - a view echoed in a recent research note from Allen Nader at Merrill Lynch.

For GE Capital, a Kemper acquisition would provide a springboard into the fastest-growing areas of the US

retail investment business - mutual funds and variable annuities.

Kemper has \$70bn in all under management, which together with GE's \$75bn would create one of the US's biggest fund management groups.

In a clear attempt to win the backing of Kemper's management, Mr Welch in his letter dangled the carrot of a consolidation of all the asset management activities under the Kemper umbrella, run by

its existing managers - although under the wing of GE Capital.

The all-cash bid of \$55 a share values the group's outstanding ordinary shares at \$1.8bn, and would be worth \$2.2bn after taking into account convertible preferred stock and stock options.

While leaning heavily on Kemper's board before it meets this Thursday, GE seems unwilling at this stage to launch an all-out contested bid.

Such an attack would be extremely rare in the financial services business. An unwanted deal would run the risk of driving away Kemper's best people.

It would also have to win the backing of state insurance regulators. In addition, mutual fund groups have a powerful political pull at their disposal: the boards of each fund run by the group could vote to have their assets managed by another company.

If that were to happen, a contested GE takeover would become a hollow victory.

The share prices of other mutual funds groups also jumped

Shares in other mutual fund groups also jumped yesterday, reflecting the market's reaction to the uninvited bid from GE Capital.

Shares in Fidelity, the largest mutual fund group, rose 1%, to 46 1/4.

Shares in Vanguard, the second largest, rose 1%, to 46 1/4.

Shares in Merrill Lynch, the third largest, rose 1%, to 46 1/4.

Shares in Capital Research, the fourth largest, rose 1%, to 46 1/4.

Shares in Franklin/Templeton, the fifth largest, rose 1%, to 46 1/4.

Shares in Dreyfus, the sixth largest, rose 1%, to 46 1/4.

Shares in Federated Investors, the seventh largest, rose 1%, to 46 1/4.

Shares in TIAA-CREF, the eighth largest, rose 1%, to 46 1/4.

Shares in Putnam, the ninth largest, rose 1%, to 46 1/4.

Shares in Dean Witter, the tenth largest, rose 1%, to 46 1/4.

Shares in Smith Barney Shearson, the eleventh largest, rose 1%, to 46 1/4.

Shares in Prudential, the twelfth largest, rose 1%, to 46 1/4.

Shares in IDS, the thirteenth largest, rose 1%, to 46 1/4.

Shares in Kemper, the fourteenth largest, rose 50%, to 46 1/4.

Shares in Scudder, the fifteenth largest, rose 1%, to 46 1/4.

SAIL INTO ASIA.



It's a growing economy, but an unknown market can be just as difficult as the roughest sea, especially in these uncertain times.

The Fuji Bank, with 9 offices and 6 subsidiaries in Europe, is here to help you navigate the Asian market, in all areas of financial management.

What's more, with 28 offices, subsidiaries and affiliates in Asia and Oceania, as well as 366 offices throughout Japan, we're also there to help you minimize the risks and maximize the opportunities.

If you'd like to know more about how we can help steer you on the right course, why not come and talk to us?

You'll find we're not only one of the world's largest banks, but we also have one of the most professional crews.



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FUJI BANK

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 Düsseldorf Branch Tel: 49-211-8900 Fax: 49-211-473407
 London Branch Tel: 44-21-558-2211 Fax: 44-21-386-1400
 Madrid Branch Tel: 34-1-581-9444 Fax: 34-1-581-9441
 Milan Branch Tel: 39-2-590627 Fax: 39-2-590659
 Paris Branch Tel: 33-1-441-6000 Fax: 33-1-441-6000
 Berlin Representative Office Tel: 49-30-385-0444 Fax: 49-30-265-0447
 Manchester Representative Office Tel: 44-61-835-2300 Fax: 44-61-834-6700
 Vienna Representative Office Tel: 43-1-5102191 Fax: 43-1-5102124

Network in Asia and Oceania: Melbourne, Sydney, Shanghai, Beijing, Dallas, Hong Kong, New York, Jakarta, Seoul, Taipei, Kuala Lumpur, Manila, Singapore, Bangkok, Ho Chi Minh

Notice to the Holders of the Warrants to Subscribe for Shares of Common Stock of

TOMOKU CO., LTD.
(the "Company")

issued in conjunction with

U.S. \$70,000,000

2 3/4 per cent. Guaranteed Notes due 1996
(the "Warrants")

ADJUSTMENT OF SUBSCRIPTION PRICE

NOTICE IS HEREBY GIVEN pursuant to Condition 7 of the Terms and Conditions of the Warrants in relation to the Warrants, that the Board of Directors of the Company passed a resolution on 21st February, 1994 (Japan Time) to make a stock split of shares of its common stock in the form of a free share distribution effective as of 20th May, 1994 to the shareholders of record on 31st March, 1994 (Japan Time) in the ratio of 0.15 new share for each one share held by them.

As a result of such stock split, the Subscription Price at which shares are issuable upon exercise of the Warrants will be adjusted as follows:

Before adjustment: ¥544.40 per share

After adjustment: ¥473.40 per share

Such adjustment to the Subscription Price shall be effective as of 1st April, 1994 (Japan Time).

IBJ Schroder Bank & Trust Company
on behalf of:
Tomoku Co., Ltd.

Dated: 16th March, 1994.



BRADFORD & BINGLEY

£200,000,000

Notice is hereby given that the terms and conditions of the Notes, the interest rate for the period 15th March, 1994 to 15th June, 1994 has been fixed at 5.75% per annum. The interest payable on 15th June, 1994 against the Coupon 12 will be £10,000,000 nominal.

Agent Bank
ROYAL BANK OF CANADA

Caisse Nationale des

Télécommunications

FF 2,000,000,000

Floating Rate Bonds

due 1997

Notice is hereby given that for the Interest Period 15th March, 1994 to 15th June, 1994 the Bonds will carry a Rate of Interest of 0.23437 per cent per annum with a Coupon amount of FF 159.31 per FF 100,000 Bond and FF 1,593.23 per FF 100,000 Bond. The relevant Interest Payment Date will be 15th June, 1994.

Bankers' Trust
Company, London Agent Bank

U.S. \$200,000,000

MARINE MIDLAND BANKS, INC.

Floating Rate

Subordinated Notes Due 2000

Interest Rate 5 3/4% p.a.

15th June 1994

Interest Payment Date 15th June 1994

U.S. \$200,000,000

CS First Boston Agent

£5,500,000

HMC MORTGAGE ASSETS

102 PLC

Class B

Mortgage Backed Floating Rate

Notes due March 2021

For the Interest Period from

March 14, 1994 to June 14, 1994 the

Note Rate has been determined at

3.50% per annum. The interest

payable on the relevant Interest

Payment Date, June 14, 1994 will

be £1,534.38 per £100,000 nominal

amount.

By: The Citicorp Mortgage Bank, N.A.

London, Agent Bank

March 16, 1994

Adjustment of Subscription Price

Nakano Corporation

(the "Company")

Bearer Warrants to subscribe for shares of common

stock of the Company (the "Shares") issued with

U.S. \$75,000,000

3 3/4 per cent. Guaranteed Notes 1996

Notice is hereby given that the Company has resolved at the meeting of the Board of Directors held on 4th March, 1994 to split the Shares (the "Stock Split") owned by the shareholders appearing on the closing register of shareholders of the Company as at 31st March, 1994 (Japan time) at the rate of one point one (1.1) Shares to one (1) Share held by them; provided, however, that the fractions of a full Share occurring upon such Stock Split shall be sold as a whole and the proceeds of the sale shall be distributed to the shareholders entitled thereto in proportion to their fractional interests, and as a result of such Stock Split the Subscription Price for the captioned Warrants shall be adjusted as follows:

1. Subscription Price before adjustment: ¥923.00 per Share
 2. Subscription Price after adjustment: ¥839.10 per Share
 3. Effective date of above adjustment: 1st April, 1994 (Japan time)

Nakano Corporation

2-28, Kudan-Kita 4-chome,

Chiyoda-ku, Tokyo

By: The Mitsubishi Trust and Banking Corporation

as Principal Paying Agent

Dated: 16th March, 1994

NOTICE OF EARLY REDEMPTION

APASCO

Apasco, S.A. de C.V.

US\$500,000,000 9 1/2 per cent. Subordinated

Convertible Debentures due 1997 (the "Debentures")

In accordance with Conditions 9(a) and 7(a) of the Terms and Conditions of the Debentures, notice is hereby given that (as defined in such Terms and Conditions) shall have the same meanings when used herein.

(a) The Official Closing Price of the Series A Variable Shares of the Company on or at least 35 of the 50 consecutive trading days ending on March 9, 1994 was at least 175 per cent of the Conversion Price in effect on each such trading day.

(b) accordingly, the Company is entitled to redeem the Debentures in accordance with Condition 9(b).

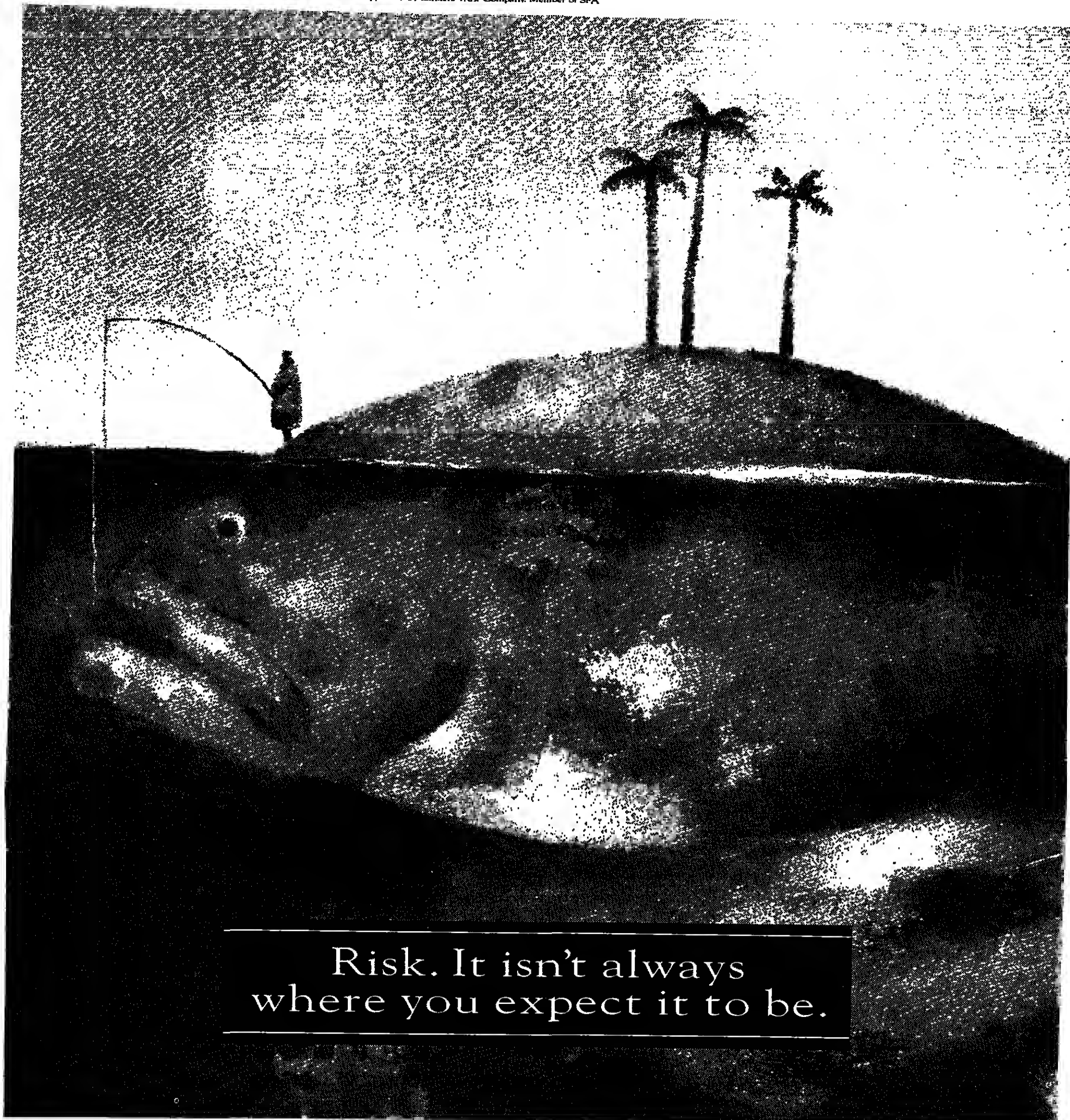
(c) the Debentures will be redeemed on the Interest Payment Date falling on May 15, 1994 at a price of US\$11,574.40 for each Debenture, equal to 115.744 per cent of the principal amount of each Debenture, together with accrued interest, for the purposes of such redemption, each Bearer Debenture, together with all unrepaid Coupons pertaining thereto, and each Registered Debenture Certificate must be presented and surrendered at the office of any of the Paying and Conversion Agents specified in such Bearer Debenture or, in the case may be, Registered Debenture Certificate in accordance with such Terms and Conditions; and

Joy to Life

FINANCIAL TIMES WEDNESDAY MARCH 16 1994

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Risk. It isn't always
where you expect it to be.

Some risks are clearly visible. Others hide from sight.

The unexpected is the one thing you can always expect.

Suppose that overseas political upheaval thins out the flow of a raw material you can't do without. That's a risk Bankers Trust can help you contain.

Or suppose a natural disaster cripples your payments system. Again, with our merchant banking help, that risk can be dealt with.

Like every financial institution, we trade,

arrange financing, close deals. But everything we do is done with an eye to helping you profit from risk.

Our greatest strength is putting all our skills to work at managing every kind of global risk.

Life can never be risk-free. Leadership isn't built on sure things. But with Bankers Trust behind you, you'll be leading from unparalleled strength.

Bankers Trust
LEAD FROM STRENGTH.

The Royal Bank of Scotland Group plc

US \$400,000,000 UNDATED FLOATING RATE PRIMARY CAPITAL NOTES

In accordance with the Terms and Conditions of the Notes, notice is hereby given that for the interest period from 16th March 1994, to 16th September 1994, the Notes will bear a Rate of Interest of 7.43286 per cent. per annum.

AGENT BANK: CHARTERHOUSE BANK LIMITED
A Member of The Securities and Futures Authority

CHARTERHOUSE

U.S. \$400,000,000

Santander Financial Issuances Limited
(Incorporated in the Cayman Islands with limited liability)

Subordinated Undated Variable Rate Notes
with payment of interest subject to the profits of and secured by a subordinated deposit with Banco Santander, S.A.
(Incorporated in Spain with limited liability)

Notice is hereby given, that for the interest period from March 16, 1994 to June 16, 1994, the Notes will carry an interest rate of 4.825% per annum. The amount of interest payable on June 16, 1994 will be U.S. \$2,954.86 per U.S. \$250,000 principal amount of Notes.

By: The Chase Manhattan Bank, N.A.
London, Agent Bank
March 16, 1994

CHASE

Notice to the Holders of
Yasuda Trust Asia Pacific Limited
(the "Company")

U.S. \$50,000,000
Floating/Fixed Rate Guaranteed Bonds Due 2002
guaranteed by
The Yasuda Trust and Banking Company, Limited
(the "Guarantor")

NOTICE IS HEREBY GIVEN, pursuant to the Conditions, that the Company intends to redeem all, but not some only of the Bonds, at their principal amount on 22nd April, 1994, pursuant to Condition 5(b) of the Bonds.

Yasuda Bank and Trust Company (U.S.A.)
On behalf of the Company

The Bear Stearns Companies Inc.
(A corporation organized under the laws of the State of Delaware, USA)

U.S. \$200,000,000
Floating Rate Notes due 1994

For the three month period 15th March, 1994 to 15th June, 1994 the Notes will carry an interest rate of 4% per annum with an interest amount of U.S. \$103.82 per U.S. \$100,000 Note payable on 15th June, 1994.

Bankers Trust Company, London
Agent Bank

1993 RESULTS BONGRAIN secures its positions

At a meeting on the 11th of March 1994, the Board of Directors of BONGRAIN S.A. approved the 1993 annual accounts. In difficult economic circumstances BONGRAIN maintained its operating income performance without reducing investments for the long term. In fact two acquisitions were made, in the Czech Republic and in Hungary.

The BRESSOR ALLIANCE and the BRESSE FINANCES companies have been fully consolidated. COLOMBO Inc.'s activity has been included up to the 17th of December 1993, when it was sold to GENERAL MILLS.

LA COMPAGNIE LAITIÈRE EUROPÉENNE's activity has not been consolidated.

Net consolidated sales represent F.Fr. 9.59 bn compared to F.Fr. 9.71 bn in 1992.

The improvement in net operating income, F.Fr. 593 m, results from the strong mobilisation of all personnel together with expense reduction measures initiated throughout the Group towards the end of 1992.

The extraordinary items of F.Fr. 145 m are heavily influenced by the gain on the divestment of COLOMBO Inc.

In millions of French Francs	1993	1992	% change
Net sales	9 591	9 706	- 1.2
Value added	2 836	2 806	+ 1.1
Gross operating income	1 000	953	+ 4.9
Depreciation and operating provisions	407	367	+ 10.9
Net operating income	+ 593	+ 586	+ 1.2
Earnings before extraordinary items	+ 596	+ 592	+ 0.7
Extraordinary items	+ 145	+ 8	-
Earnings after tax	+ 479	+ 357	+ 34.2
Net earnings excluding minority interests	+ 434	+ 354	+ 22.5
Net earnings per share	225.6 F	184.3 F	+ 22.4

Capital expenditures amounted to F.Fr. 290.7 m.

The year ended with positive net cash and short term investments of F.Fr. 592.7 m, compared to net debt of F.Fr. 301.3 m at end 1992.

The Board of Directors has decided to purchase, from the BONGRAIN family, all of the shares not as yet owned by BONGRAIN S.A., in ZAUSNER FOODS Corp., the holding company for the Group's North American activities.

At the shareholders' Annual General Meeting, to be held on the 29th of April at BONORAIN's registered office, the Board of Directors will recommend a net dividend per share of 61 Francs.

INTERNATIONAL COMPANIES AND FINANCE

Chinese group powers on with HK float

Simon Holberton visits Dongfang, a leading maker of power generation equipment

Dongfang Electrical

AC and DC motors
Yuan27.2m

Steam turbine generators
Yuan195.5m

Hydro turbine generators
Yuan203.2m

Others
Yuan20.1m

Total turnover
Yuan250.2m

Source: Dongfang

*Year end 31 December 1993

It takes nearly two and a half hours to travel the 59 kilometres from Chengdu, the provincial capital of Sichuan in China's south-west, to Deyang, the home of Dongfang Electrical Machinery.

Through a landscape undergoing a familiar transformation from agriculture to industry, the journey is enlivened by the anarchic quality of motoring in modern China. But it is one which the managers of Dongfang, China's third largest maker of power generation equipment, hope will not deter investors.

The company expects to be floated on the Hong Kong stock exchange next month - the eighth of the first nine companies which the Chinese government nominated last year for listing outside China - with an issue of about 125m "H" shares.

Nomura, the Japanese securities house which is the lead manager, estimates that this offering to foreign investors, which is equal to 25 per cent of Dongfang's capital, will raise about HK\$350m (US\$45m). A slightly smaller percentage of the company will be issued in the form of "A" shares to mainland Chinese investors and listed on the Shanghai stock exchange.

In the Hong Kong stock market, Dongfang is an "infrastructure play", a "warrior" on the fast-growing Chinese economy. The company appears well positioned. According to Dongfang, it has a 40 per cent share of the Chinese market for hydroelectric power generating equipment and a 35 per cent share of the country's steam turbine generator market.

Overall it has a share of 30 per cent of the Chinese power engineering market - a market which still has plenty of room to mature. Electrification touches only 67 per cent of households in China, compared with 80 per cent in Thailand and 82 per cent in India.

Moreover, if China is to sustain economic growth rates of around 10 per cent a year it desperately needs more electric power plants. On current trends, demand for electric power is set to double between now and 2000. According to Mr Jacky Chiu, an analyst at Nomura Research Institute, this means adding an extra 20,000MW of generating capacity each year. But the gap between China's need and its capacity to meet that need is large. The production capacity of the three mainland manufacturers is only 10,000MW to 12,000MW a year.

"As the Chinese government has designated that most of the annual requirement for power generation capacity should be satisfied locally, local manufacturers have to increase substantially both production capacity and technological levels in the next few years," Mr Chiu wrote recently.

Underlining the need for rapid development of the power industry is the decision of the Chinese government to offer foreign investors stakes in other power companies. Recently 24 companies were nominated for foreign (mostly Hong Kong) listings and among them is Harbin Power Plant Equipment Group, China's biggest manufacturer of power generating equipment, as well as four power supply companies.

Dongfang's managers say that increasing productive capacity and raising the company's technological sophistication are the main benefits they see coming from the listing in Hong Kong.

According to Mr Chen Weijian, general manager, Dongfang plans to invest Yn250m (US\$25m) over the next three years in increasing the capacity of Dongfang's works.

Of this, the lion's share (Yn200m) will go to upgrade its technology in hydro power production. By 1997 it wants to increase production capacity of its hydro generators to 1,600MW from 600MW. A smaller amount (Yn250m) will be allocated to increase the production of steam turbine generators with capacities of 300MW and 600MW.

Dongfang needs an infusion of capital to meet this. Its order book is full until the end of 1995. Not only that but by that time China's biggest hydroelectric development - the Three Gorges project on the Yangtze river - is expected to be well under way.

When completed the Three Gorges will be the world's largest lake and hydroelectric power system. In its first phase the project will consist of 26 700MW units. Although Dongfang will be just one of the suppliers to the project company executives expect the Three Gorges to underwrite its future for many years to come.

In pursuit of technology, the company is exploring joint venture possibilities with European and North American power generation equipment manufacturers. Dongfang is holding preliminary discussions with GE Canada about a joint venture in hydroelectric power, and it recently signed a draft memorandum of understanding with Siemens.

This gives the German manufacturer 51 per cent of a steam turbine assembly and test factory. Siemens will put up DM25m for its share of the business while Dongfang will provide the land and erect the factory. Executives expect the joint venture to be operational in 1995.

As Mr Rao Fangquan, a deputy general manager, observed: "The most important aspect of a joint venture is not the capital but the technology, so our company can develop."

NKK to cut 1,300 more jobs in restructure

By Michio Nakamoto in Tokyo

NKK, the Japanese steel company, plans a wide-ranging restructuring aimed at reducing employees by a further 1,300 and increasing profits by Y175bn (\$1.65bn) over the next three years.

The company, which faces heavy losses this year, says the restructuring is intended to return the company to profit so that it can resume dividends by 1995-96.

Earlier this month, the company revised its earnings estimate for the year ending this month and said that it expects pre-tax losses of Y25bn.

The company is being forced to pass its dividend for the first time since it was stock market listed in 1949.

Mr Shunkichi Miyoshi, president, said NKK aimed to increase its ratio of profits to sales in the engineering division to 5 per cent from the current 3 per cent.

Under the plan, NKK will cut capital spending to a third of levels seen over the past three years, or about Y140bn.

Steelmaking operations will be streamlined by reducing the product range, integrating production of some products at one plant and shifting production of other products to an affiliated electric furnace steel maker.

The latest plan brings the total number of employees to 4,500. Last year, NKK said it would reduce employee numbers by 3,200 by fiscal 1995.

Reductions would be achieved through transfers to subsidiaries, cuts in graduate employees and natural attrition.

NKK expects to continue its operations in electronics and property development which are two areas the company has been working in.

It also hopes to increase its involvement in south-east Asia where it is considering local production of steel or joint ventures depending on the needs of each particular country.

The restructuring plan is not expected to affect National Steel, the US company in which NKK has a 50 per cent equity stake.

National Steel itself is beginning to enjoy the fruits of its own restructuring. Mr Miyoshi said, and NKK hopes to support the running of National Steel by its US management.

Banks warn of Haka exposure

By Christopher Brown-Humes in Stockholm

Three leading Finnish banks, struggling to recover from the country's financial crisis, warned yesterday that they faced further big credit losses after the Haka construction group filed for bankruptcy.

Uutela, the country's second largest banking group, said the collapse could produce write-offs of up to FM450m, but it stressed that this did not alter its forecast of a substantially reduced deficit in 1994. It said its total exposure to Haka amounted to around FM120m.

Kansallis-Osake-Pankki, Finland's largest bank, said it would suffer a loss of no more than FM200m from the bankruptcy. It added that the amount would be covered by a FM900m provision, taken last year, for unidentified bad loans. Its claims on Haka companies total FM815m.

A third bank, Postipankki, estimated potential credit losses at FM300m, although its total exposure amounts to just over FM800m. It said the nominal value of its collateral was more than FM750m.

"The final credit and guarantee losses are dependent upon both the successful liquidation of the collateral as well as the orderly completion of ongoing projects," Postipankki stated.

Bank of Finland, the Finnish state-controlled steel group, yesterday unveiled a FM144m (\$26m) profit after financial items for 1993, a sharp turnaround on the FM87m loss reported for the previous year. It benefited from firmer steel prices, cost-cutting and the weaker Finnish markka. But the result was held back by high financing costs, lower demand in western Europe, and continued losses at the company's Transtech rolling stock unit. The group said it would not pay a dividend for the third consecutive year.

Operating profits after depreciation were FM923m, or 11.8 per cent of sales of FM7,011m. This compares with profits of FM454m on turnover of FM6,501m a year earlier.

Ball bearing makers agree supply deals

By Victor Mallet in Bangkok

Minebea of Japan and FAG Kugelfischer of Germany, the two ball bearing manufacturers recently hit by heavy losses, are to supply each other with bearings in order to reduce their investment and production costs.

Under the agreements - signed in Thailand, where Minebea has its largest factory - Minebea will supply FAG with miniature and small ball bearings, while FAG will supply Minebea with small and medium-sized bearings.

The two companies will also swap technical knowhow. They said they would notify the European Commission of the deal to obtain clearance under the European Union's competition rules.

Executives from Minebea, which is particularly strong in Asia, and FAG, with its European base, said such a company would continue to market products separately using its own brands.

"Each company will benefit from the manufacturing strengths of the other," said Mr Goro Ogino, Minebea president, in a statement, "and both companies will be able to realise important cost savings at the capital investment and manufacturing level."

Mr Peter-Juergen Kreber, chairman of FAG's management board, said: "Today's agreements represent a vital opportunity for us both to ensure our ability to deliver a wider range of ball bearing products at the lowest possible cost."

According to the deal, Minebea will supply bearings with an outer diameter of up to 24mm, while FAG will supply those with diameters between 24 and 35mm.

Both companies have undergone extensive restructuring. Minebea's net loss was Y61.21bn (\$576m) in the year to September 30, 1993, while FAG reported a net loss of DM439m (\$360m) in 1992.

Santos nearly doubles earnings

By Nikki Tait in Sydney

Santos, the Adelaide-based oil and gas company, reports a near doubling of after-tax profits to \$A219.3m (\$157.5m) for 1993. In the previous year, profit after abnormality was \$A112.7m.

In part, the sharp improvement was due to a turnaround on abnormality. In 1993, Santos booked a net gain of \$A94.9m, reflecting a \$A46.6m surplus on the sale of the company's shares in Sagasco, which was taken over by Boral last year, a \$A41.1m gain from tax-related matters, and a \$A55.5m write-down of capitalisation expenditure.

In the previous year, there was a \$A49.5m abnormal charge.

Santos also benefited from lower tax and interest charges, with the latter falling to \$A38.2m from \$A60.2m. Earnings before interest and tax in 1993 stood at \$A327.4m, marginally below 1992's \$A322.2m.

NOTICE IS HEREBY GIVEN OF THE ANNUAL GENERAL MEETING OF SHAREHOLDERS to be held at Julius Baer Bank and Trust Company Ltd., Kirk House, Grand Cayman, Cayman Islands, on the 5th day of April, 1994 at 10 a.m.

AGENDA

1. To receive and consider and, if thought fit, adopt the accounts presented by the Directors for the year ended 31st December 1993 and the reports of the Directors and Auditors.

2. To elect the new Directors.

3. To approve the appointment of Price Waterhouse Coopers and authorise the Directors to fix the Auditor's remuneration.

By order of the Board of LIQUIBAER, Julius Baer Bank and Trust Company Ltd., C/O: Box 1160, Grand Cayman, Cayman Islands.

A shareholder holding registered shares is entitled to attend, vote and appoint one or more proxies to attend and vote on his behalf. A proxy need not be a shareholder of the company.

A shareholder holding bearer shares is entitled to attend and vote. Exercise of these rights as respects to bearer shares will be recognised only on presentation at the Meeting of the bearer certificate or satisfactory evidence of the holding. Such evidence may be obtained by depositing the certificate with one of the Agents listed below against written receipt, which must be produced at the Meeting.

LIQUIBAER

LIQUIBAER U.S. DOLLAR FUND LIMITED GRAND CAYMAN
A company incorporated in the Cayman Islands with limited liability

THE LATIN AMERICA INCOME AND APPRECIATION FUND N.V.
DIVIDEND NOTICE

Consistent with the authorization granted by the Board of Supervisory Directors on March 11, 1994, notice is hereby given that the Fund's Managing Director has declared a distribution of U.S. \$0.50 per Class A Share and an equivalent amount on a yield basis for Class B Shares, payable on March 25, 1994 to common shareholders of record at the close of business on March 21, 1994. In the case of shares held in registered form, or upon presentation of coupon number 7 attached to the common share certificate to the Fund's Administrator (on or after March 22, 1994), in the case of common shares held in bearer form.

By Order of the Managing Director
Administrative, Managing Director and Location of Principal Office
Moat/Pennon Trust (Cayman) N.V.
John B. Goodfriend
William H. Goodfriend
Netherlands Antilles

Investment Manager
Scudder, Stevens & Clark, Inc.

Reminder Notice of Bondholders Optional Redemption Rights
Bell Resources Financial Services N.V.
U.S. \$200,000,000
5 1/2 per cent. Guaranteed Convertible Subordinated Bonds due 2002

Unconditionally guaranteed on a subordinated basis by, with non-detachable subordinated conversion bonds (the "Conversion Bonds")

Issued by, and convertible into Ordinary Shares of \$A0.50 each of, Australian Consolidated Investments Limited (previously called Bell Resources Ltd.)

ACN 008 670 924

In accordance with Condition 6(C) of the U.S. \$200,000,000 5 1/2 per cent. Guaranteed Convertible Subordinated Bonds due 2002 (the "Bonds"), Bell Resources Financial Services N.V. (the "Issuer") hereby gives notice that each Bond may, subject to the Conditions of the Bonds, be redeemed at the option of the holder on June 2, 1994 at 125.45 per cent of its principal amount provided that all unredeemed Coupons appertaining thereto are attached or surrendered therewith.

To exercise such option in respect of any Bond the holder must deposit such Bond (with the form of election of early redemption enclosed on such Bond duly completed) with any Paying Agent listed below not earlier than April 18, 1994 and not later than May 2, 1994. Any Bond so deposited may not be withdrawn without the prior consent of the Issuer.

Any holder who wishes to exercise his option under Condition 6(C) should deposit his Bonds in the manner set out above.

On redemption of any Bond, the relative Conversion Bond attached thereto shall simultaneously be redeemed at the amount paid up thereon, being U.S. \$0.01 per U.S. \$1.00 principal amount of the Conversion Bond.

PRINCIPAL PAYING AND CONVERSION AGENT
The Chase Manhattan Bank, N.A.
Woolgate House, Coleman Street, London EC2P 2HD

PAYING AND CONVERSION AGENTS
Chase Manhattan Bank Luxembourg S.A. (Switzerland)
5 Rue Pictet
L-2338 Luxembourg-Gründ
Banque Bruxelles Lambert S.A.
24 Avenue Marx, B-1050 Brussels

THIS NOTICE IS IMPORTANT IF BONDHOLDERS ARE IN ANY DOUBT AS TO THE ACTION THEY SHOULD TAKE THEY SHOULD CONSULT THEIR STOCKBROKER, LAWYER, ACCOUNTANT OR OTHER PROFESSIONAL ADVISER WITHOUT DELAY.

The Chase Manhattan Bank, N.A.
for and on behalf of
Bell Resources Financial Services N.V.
March 16, 1994

BT Alpha PLC
(A company incorporated in England with limited liability with registered No. 2369180)
to be renamed

Bankers Trust International PLC

Pursuant to Bankers Trust International PLC's ("BTI") plan to reorganise its corporate structure under which a wholly-owned subsidiary, named BT Alpha PLC, will acquire substantially all of BTI's assets and business, notice is hereby given to the holders of the Warrants referred to below issued by BTI that, in each case in accordance with the conditions of such Warrants, with effect at close of business on 31 March, 1994, BT Alpha PLC, to be renamed Bankers Trust International PLC (the "New Company") will be substituted as principal obligor under such Warrants in the place of BTI.

In relation to each such issue of Warrants, copies or pending execution, the agreed text of the Deed Poll pursuant to which such substitution will be effected, of the agreement pursuant to which the New Company will become party to the Warrant Agreement relating to such Warrants, and of any other documents which might otherwise reasonably be regarded as material to the relevant Warrantholders will be available for inspection at the specified office of each of the Warrant Agents.

2,000,000 Call Warrants related to the 2 per cent. Treasury Stock due 10 June 2003, issued on 30 September 1993 (Common Code: 4617541)

4,700,000 Warrants in relation to the Ordinary Shares of J Sainsbury plc expiring 30 January 1998, issued on 17 February 1994 (Common Code: 4884868)

By: Bankers Trust International PLC
1 Appold Street, Basingstoke
London EC2A 2JE
16 March, 1994

BT Alpha PLC
(A company incorporated in England with limited liability with registered No. 2369180)
to be renamed

Bankers Trust International PLC

Pursuant to Bankers Trust International PLC's ("BTI") plan to reorganise its corporate structure under which a wholly-owned subsidiary, named BT Alpha PLC, will acquire substantially all of BTI's assets and business, notice is hereby given to the holders of the Notes referred to below issued by BTI that, in each case in accordance with the conditions of such Notes, with effect at close of business on 31 March, 1994, BT Alpha PLC, to be renamed Bankers Trust International PLC (the "New Company") will be substituted as principal obligor under such Notes in the place of BTI.

In relation to each such issue of Notes, copies or pending execution, the agreed text of the Deed Poll pursuant to which such substitution will be effected, of the agreement pursuant to which the New Company will become party to the Fiscal Agency Agreement relating to such Notes, and of any other documents which might otherwise reasonably be regarded as material to the relevant Noteholders will be available for inspection at the specified office of BTI.

£1,156,000,000 Non Recourse CDO Linked Notes due 1998, issued on 20 December 1993 (Common Code: 4783573)

£20,000,000 Step down Coupon Notes due 2001 with 4,700,000 Warrants in relation to the Ordinary Shares of J Sainsbury plc expiring 30 January 1998, issued on 17 February 1994 (Common Code: 4643348/6980)

Italian Lire 30,000,000,000 3.55 per cent. 36M 500 Index Linked Notes due 1 January 1997, issued on 5 January 1994 (Common Code: 4796861)

By: Bankers Trust International PLC
1 Appold Street, Basingstoke
London EC2A 2JE
16 March, 1994

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Shift in focus leaves Williams down at £153m

By Peggy Hollinger

A shift in focus hit Williams Holdings, the conglomerate which yesterday announced a \$4.2m drop in pre-tax profits to \$133.2m for the year to December 31.

Profits were depressed by a \$17.1m loss on the disposal of the bulk of Williams' engineering division to management for \$40m. The sale is part of the group's strategy to focus on three sectors - building products, security and fire protection. Excluding exceptional items, pre-tax profits rose by 13 per cent to \$170.3m.

Cashflow from operating activities, for which Williams has been criticised in the past, improved by 15 per cent to \$227.5m. This represented 119 per cent of operating profits.

Mr Nigel Rudd, chief executive,

was bullish about the outlook for the group's main operating markets, saying there were definite signs of recovery in both the UK and US. Some 80 per cent of the group's sales are from those two markets. In Britain however, "government policy and consumer caution will limit the pace and degree of demand improvement," he said.

Williams was seeking growth in spite of such difficulties. Mr Rudd said, through expanding its share of even sluggish markets by tapping new outlets.

The group's sales were 17 per cent higher at \$1.21bn, including a \$68.9m contribution from acquisitions. Continuing businesses were 11 per cent up at \$1.1bn.

Williams pursued acquisitions aggressively during the year, spending \$157.6m on

seven businesses. These contributed \$6.3m to operating profits, which improved overall by 13 per cent to \$191.6m.

North American building products showed the strongest advance, as a result of a cost reduction. Operating profits rose 34 per cent to \$38.6m.

Fire protection improved by 19 per cent to \$47.6m, while the European building products operations contributed \$29.1m against \$29.3m.

The security division improved from \$22.5m to \$25.2m.

In line with its stated policy of seeking to improve the dividend cover to about two times, Williams proposed a final payment of 7.75p. This leaves the total dividend just 2 per cent higher at 12.75p. Earnings fell from 18.5p to 15.7p.

See Lex

Flotation values Maid at £89.1m

By Paul Taylor

Shares in Maid, the on-line business information supplier, were priced at 110p yesterday valuing the group at \$89.1m - well below market expectations fuelled by the company and its financial advisers.

Some 11.5m shares in the nine-year-old group have been placed firm with institutional investors by Moore Govett, stockbroker to the issue, on behalf of the company.

The new shares represent a little more than 14 per cent of the shares in issue following the placing.

Earlier the company had been confidently predicting that the issue, underwritten by Hill Samuel, would place a minimum value of £100m on the group and provide it with about £16m in net new funds. A placing price of up to 150p a share had been mooted.

However the flotation has been dogged with controversy, with some analysts and fund managers expressing concern and surprise at Maid's proposed stock market valuation and lack of established track record.

As a result the company scaled down its expectations for the flotation price and has abandoned plans to spend \$4m on a building to consolidate the group's UK operations.

In addition, a number of existing BES investors in the company who had been expected to sell shares in the placing, have decided to wait.

Nevertheless, both the company and its advisers insisted that the placing had been a success and defended the pricing while blaming competitors for "the lack of interest" surrounding the issue.

Mr Stephen Ansellbrook of Hill Samuel, described the 110p price as "very attractive", and said the placing had been well received by most institutional investors.

"We set out to raise enough money for the company to move forward and we have done that," he said, adding, "it is a hell of an achievement for a company which, as some people have pointed out, made only \$600,000 in profits last year."

Mr Daniel Wagner, Maid's 30-year-old founder and chief executive, said he was "thrilled to bits" with the placing while acknowledging that market conditions had resulted in the issue having to be priced "more competitively".

He said the new funds, while somewhat less than anticipated, would enable Maid to continue to develop its product portfolio, including a planned version of Maid for Windows version of its software.

He dismissed the company's critics who have questioned various aspects of its operations, including its dependence on primary business information providers.

"This is a brilliant business and we are going to prove it in the market," Mr Wagner said.

Saatchi back to black with £19m

Saatchi & Saatchi, one of the world's largest advertising groups, yesterday reported pre-tax profits of £19.2m for the year ended December 31 1993, compared with a loss of £585.1m in 1992, writes Diane Summers.

The figure was in line with City expectations, which were revised downwards by about \$8m in December, after a profits warning from the group. The shares closed down 1p at 141p.

Saatchi hailed the results as a return to profitability for the first time since 1988. However, the 1992 figure included a \$500m write-off of goodwill associated with US acquisitions made in the 1980s.

Revenue from continuing operations rose 10 per cent, from £731m to £806m, but the rise was accounted for by currency movements, said Saatchi. Excluding these,

revenue for 1993 was flat.

Similarly, operating costs appeared to rise from £713.8m to £776.6m. But once constant exchange rates were applied and severance, property credits and disposals excluded, costs dropped by 1 per cent.

The group warned that revenues in 1994 will be lower than for 1993. "The revenue outlook for 1994 is difficult. We have lost two big clients, in neither case due to the quality of our work, and clients remain cautious about their planned level of expenditure, particularly in Europe."

Trading profits increased by 8 per cent to £36.8m (£34.2m). Severance costs of £19.1m were charged and £7.3m surplus property provisions were credited. Excluding currency movements and exceptional trading profits increased by 1 per

cent. Profit margins, excluding exceptional items, increased from 6.1 per cent to 6.3 per cent in 1993. Mr Charlie Scott, group chief executive, admitted that the group was not on course to meet his target of 10 per cent margins by 1995. Meeting the target was dependent on revenues increasing in line with inflation, and that had not happened during 1993, he said.

Profit attributable to shareholders totalled £7.3m (loss of £613.7m), with earnings per share of 3.1p (losses of 382.8p). No dividend will be paid.

After taking into account a £73m rights issue in June and currency movements, average net debt during December 1993 was £112m, a reduction of £82m. Analysts forecast pre-tax profits of about £30m for 1994, with earnings per share of 7p.

Of relationships and bottom lines

Diane Summers on the personal conflicts that split the Saatchi board

Mr Charlie Scott, group chief executive of Saatchi & Saatchi, yesterday described the past 18 months as the worst in his life. However, he considers his struggle to reduce debts, restructure operations and install effective management is now largely over.

As his statement accompanying the group's results yesterday said: "All the businesses remaining in the group are now profitable, and as trading conditions in our core markets start to improve during 1994, I am confident Saatchi will demonstrate the performance that our shareholders have the right to expect."

Whether or not his confidence is justified will depend, to a large extent, on two factors. First, the Saatchi board will need to pull together and overcome the embarrassingly public conflict between Mr Maurice Saatchi, its chairman, and Mr Charlie Scott.

Second, the revamped management, particularly in the US, will need to start showing new business gains and evidence that it can reverse the decline in market share which has been eroding revenues.

The relationship between Mr Scott and Mr Maurice Saatchi appeared to decline sharply from the point when, in December, it was announced that Maurice's brother, Charles, would step down as a director.

It was also decided that Saatchi's offices in Berkeley Square, in the West End of London, would be vacated.

There followed rumours that the brothers were planning a buy-out and that Maurice wanted to take over more of the running of the group. Now, a compensation committee, headed by Sir Peter Walters, will examine Maurice's five-year rolling contract, described by Mr Scott as "not within the spirit of the Cadbury guidelines".

Says one Maurice supporter: "He admits he has withdrawn a lot over the past year, he had let things drift. He's left executive functions with the board and he now believes that was a mistake."

Maurice is said to feel that the "bean counters" have failed to deliver their promises on the financial side. Mr Scott's supporters, in turn, say that Maurice has not delivered on his part of the bargain - bringing in new clients.



Maurice Saatchi (left) and Charlie Scott: there is concern that their public conflict could affect relationships with clients

To blame Mr Scott for what continues to be a depressing picture is unjust, according to the heads of other agencies.

Said the chief executive of one large group yesterday: "One has to remember it was Maurice Saatchi who made the bid for the Midland Bank. He was also one of the architects of the huge, sprawling, shambaling empire. To begin to blame Charlie Scott, who seems to have done a fair job of stabilising the business, seems to me to be desperately unfair. Indeed, there wouldn't be a business without Charlie Scott."

The head of another large agency pointed to the "nervousness and confusion" resulting from the conflict.

Fixed costs are high. The staff of about 11,000 account for more than 60 per cent of revenue. By growing revenue, Mr Scott is aiming to get this down to the 55 per cent or so enjoyed by competitors Interpublic and Omnicom - he calculates that at least half of any extra revenue will flow straight to the bottom line.

Mr Scott calculates that over the past four years, and in particular over the past two, about 70 per cent of the managers he describes as the "key drivers" towards these ends have been replaced or transferred.

For the first time since I joined the company, we now have quality CEOs in all our operating companies. These people have been selected for their ability to grow the business," he said.

Medeva chief goes as rise of 28% to £46m is shown

By David Wighton

Mr Ian Gowrie-Smith, the Australian entrepreneur who founded Medeva, the acquisitive pharmaceutical group, is resigning his executive position nine months after a profit warning which halved the share price.

Mr Gowrie-Smith, managing director, and his long-time business partner Mr David Lees, who is resigning as finance director, will continue to provide the group with "acquisition services" on a consultancy basis. Mr Gowrie-Smith will remain a non-executive director.

The resignations came as Medeva announced a 28 per cent increase in pre-tax profits to £46.1m for 1993.

In July the company warned that profits would be about \$10m lower than analysts' expectations of \$53m-\$57m largely due to problems at DMS and MD Pharmaceuticals, US subsidiaries, which would cost almost \$7m.

Sales jumped 39 per cent to

£200.4m with organic growth excluding exchange rate movements of 20 per cent. Earnings per share slipped 4 per cent to 11.8p due partly to a higher than expected charge. The final 1.8p (1.5p) giving 2.7p (2.25p) total.

Mr Bernard Taylor, who was brought in as chairman in 1990, insisted that the resignations were not linked to the problems the group encountered last year. He denied there had been any pressure on them to go.

Although it is an open secret that Mr Taylor found it hard to work with Mr Gowrie-Smith sources close to the company insisted that the resignations were voluntary.

"Bernard couldn't force them to go. In the end they went because they got bored."

The shares added 7p to 155p yesterday.

Both will receive £30,000 in compensation for loss of office and have been granted three-year consultancy agreements. These provide for initial payments of £286,000 and £230,000 and payments over the next

three years totalling a minimum of £700,000 and £400,000 respectively. Mr Gowrie-Smith received a salary of about £300,000 last year, down about 35 per cent.

Mr Taylor revealed that the group pulled out of a potential deal after the shares slumped from 216p to 116p on the profit warning but said it still needed to make acquisitions. Mr Gowrie-Smith said it could afford to make a £100m purchase without issuing more shares.

COMMENT

The rather modest rise in Medeva's share price yesterday may reflect the fact that Mr Gowrie-Smith's move was seen as only a matter of time. There were also a few negatives with the figures, which were boosted by booming flu vaccine sales, including a year delay in the important hepatitis B vaccine programme. On forecasts for the current year of about \$51m the shares are now on a multiple of about 12.5. There is plenty of scope for further recovery.

Owen & Robinson price rises on reports of stake acquisition move

By Andrew Bolger

Shares in Owen & Robinson, the gold jewellery and sports footwear retailer, rose 8p to 34p yesterday after a report that a stake in the group might be taken by Mr Philip Green, the controversial former chairman and chief executive of Amber Day, the discount retailer.

Mr Green sold last night: "At this moment, I have bought no shares." It is understood, however, that Mr Green has had talks with Mr Maurice Dweck, a former chairman of Owen & Robinson, who still owns 15.8 per cent of its shares.

Mr Green declined to comment on any possible talks, but said: "I always look at interesting situations. If it's the right deal at the right time, I might look at it."

Mr Steve Foot, Owen & Robinson's finance director, said of Mr Green: "If he's buying shares, he hasn't done so yet."

Mr Green stepped down in September, 1992, from Amber Day, which has since been renamed the WEW Group. He left with a £1.13m golden handshake after a deluge of adverse press coverage was followed by results well below analysts' expectations. Mr Green also received £7.6m from selling his stake in the group.

B&J puts pressure on bankers

By Peggy Hollinger

Brown & Jackson, the discount retailer which has raised \$39m from shareholders since 1992, yesterday sought to put pressure on its bankers by warning it did not continue trading unless working capital facilities of £14m were agreed soon.

The company's shares fell by 3p to 24p as it revealed substantially larger than expected losses for 1993 and warned of the difficulties in negotiations with its bankers.

If working capital facilities for the next 12 months are not secured soon, the £6m sale and leaseback transaction which was due to be completed yesterday cannot go ahead.

Analysts held out little hope of a resolution, at least through the banks, and said that the group had been expected to make further losses this year. "B&J has just passed its warning to its bankers," said Mr Cullum, analyst with brokers Panmure Gordon. "So the banks will get out what they put in."

The announcement was also a high risk gamble, he suggested. "If you were a supplier would you now want to supply B&J? This sort of public disagreement could be self-filling," Mr Cullum said.

Mr Ian Gray, the chief executive appointed following a rescue rights issue in 1992, said the group had "adequate trading facilities today". He was confident that the company would be able to trade until a solution was found. "We have a number of options," he said.

One of the options was investment by a foreign discount retailer, he said. The group was in discussions with both the retailer and the banks.

Midland Bank is believed to have decided not to provide further facilities in light of the group's most recent results and its past trading record.

Brown & Jackson unveiled full year losses of £12.7m (£6.6m) on turnover of £170m (£167m), against average expectations of an £8m deficit.

Turnover edged ahead to £30m (£29.6m). Losses per share came out at 1.47p (£0.6p earnings). The dividend is being passed. Last time there was a total of 1p.

Ashanti

Ashanti, one of the world's biggest gold mines, will have a market capitalisation of up to \$1.67bn (£1.14bn) after its flotation, not £1.87bn as printed in yesterday's Financial Times.

terday cannot go ahead.

Analysts held out little hope of a resolution, at least through the banks, and said that the group had been expected to make further losses this year. "B&J has just passed its warning to its bankers," said Mr Cullum, analyst with brokers Panmure Gordon. "So the banks will get out what they put in."

The announcement was also a high risk gamble, he suggested. "If you were a supplier would you now want to supply B&J? This sort of public disagreement could be self-filling," Mr Cullum said.

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BA separates out engineering side

By Paul Betts, Aerospace Correspondent

British Airways is setting up its engineering activities as a separate profit centre next month in an effort to reduce the airline's overall aircraft maintenance and engineering costs, as well as expand engineering services to other carriers.

The engineering and aircraft maintenance activities employ about 10,000 people out of BA's total 50,000 strong workforce and include facilities at London's Heathrow airport and in Wales, where BA overhauls Boeing 747 jumbo airliners and recently opened an aircraft avionics repair and maintenance centre.

The engineering activities

headed by Mr Alistair Cumming are also expected to be strengthened by imminent management changes to boost the company's engineering management team.

BA's engineering operations have seen significant growth over the last three years. The company, which outlined yesterday its plans to its unions to transform the engineering business from a cost centre into a profit centre, sees strong potential for further growth in aircraft maintenance and engineering services.

Already about 15 per cent of BA's overall engineering activities involves work for other carriers and the airline hopes to develop this third party business through its latest reorganisation.

DIVIDENDS ANNOUNCED

	Current payment	Date of payment	Current dividend	Total for year	Total last year
Brown & Jackson	nil	July 5	0.1	nil	0.1
Castle Comms	4.5p	July 5	4	8.5	8.5
Crocodford	2.5p	Apr 29	1	2.5	14
Delta	10.3	June 1	9.8	14.5	14
Emess	nil	May 23	0.1	0.1	0.1
Everest Foods	9.2p	May 13	7.85	13	11.25
Greasey	1.2	May 17	1.2	3.7	3.7
GT Chile Growth	3.3p	May 17	6.8	10.9	10.9
Hall Engineering	60p	Mar 31	1.6	120	25
Hampden	3.02	Apr 22	5.34	9.5	8.64
Haywood Williams	nil	-	0.8	nil	1
Lionheart	8.5p	July 1	1.5	13	12.5
Medeva	0.2	May 23	1.6	2.7	2.25
Peterson Zoch	1.8p	May 8	2.35	-	12.6
Schrodes	1.7	May 8	1.8	-	5
Wassell	2.4p	May 26	1.7	3.4	2.5
Williams Hodge	7.75p	May 26	7.5	12.75	12.5
Wimpey (George)	3.25p	May 9	3.25	5.25	5.25
Wolseley	4.72	July 20	3.55	-	13.3

Dividends shown per share net except where otherwise stated. †On increased capital. \$USM stock. ‡Cents throughout.

CABLES - CIRCUIT PROTECTION

DELTA

CONSISTENT STRATEGIC VISION

	1993	1992
		£m
Turnover	832.7	783.9
Profit before interest	60.0	60.7
Profit before tax	53.4	55.0
Earnings per share	23.1p	23.0p
Ordinary dividend	14.5p	14.0p

Excerpt from the Annual Report & Accounts for the year ended 31 January 1994, from which the above is an extract, are available from 29th March from the Secretary, Delta plc, 1 Kingway, London WC2B 6NF. Telephone 01-536 3535.

ENGINEERING - INDUSTRIAL SERVICES

Wimpey bounces back into black with £25.5m

By Andrew Taylor,
Construction Correspondent

Wimpey, following its biggest ever pre-tax loss of £111.6m in 1992, bounced back into the black last year with pre-tax profits of £25.5m.

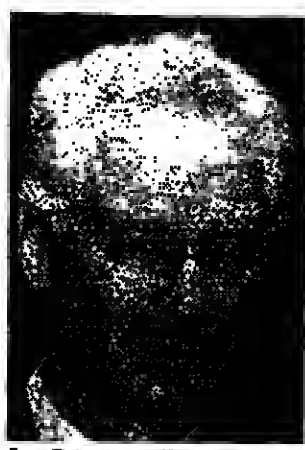
Trading profits rose 85 per cent from £22.1m to £40.9m, boosted by a strong recovery in UK housing, with completed sales up by a quarter to 6,596.

Group turnover fell from £1.64bn to £1.59bn. The final dividend is again 3.25p, maintaining the total for year at 5.25p, just covered by earnings of 6.81p a share.

Housing, in spite of only breaking even overseas, moved from a £33.3m loss in 1992 to a £25.4m profit last year. Operating margins in the UK, having fallen in every year since 1989, more than doubled from 3 per cent to 8.5 per cent last year. This compared with a peak of 19 per cent four years ago.

Mr Joe Dwyer, chief executive, was optimistic about further rises in UK house sales and margins, with prices already starting to edge off the bottom in south-east England.

He said the company had seen no evidence that tax rises due to take effect next month were dampening demand from prospective purchasers.



Joe Dwyer: optimistic about further rises in UK house sales

Wimpey would be selling its house building businesses in France, Spain, Australia and southern California to concentrate on its UK and other UK housing operations. Also still up for sale was £135m of commercial property investments.

The group has raised more than £300m from disposals, transforming its balance sheet and reducing gearing from 30 per cent to 5 per cent, the lowest level for 20 years.

Net debt of £28m at end-December, however, is expected to rise this year as the group increases land purchases,

while UK house sales are expected to top 7,500 during the period. Gearing was likely to reach 30 per cent, implying net debt of about £180m.

Construction profits halved from £4.5m to £2.3m on turnover down from £683m to £659m, reflecting the difficult conditions in the UK. The figures however excluded £2m of interest on advanced payments on construction projects.

Minerals, helped by a £7.9m windfall planning gain, rose to £13.1m (£1.6m).

COMMENT

Wimpey's results were bang in line with expectations. Even so its share price fell 8p to 210p following the figures. The market having given the company credit for rebuilding its balance sheet is concerned about where it goes next. There is concern that its emphasis on first time buyers will mean that margin recovery may be restricted. The UK aggregates business also compares unfavourably with its main rival, Tarmac. The company talks bravely of acquisitions and organic expansion, but now needs to deliver. Profits of £46m put the group on a prospective pie of more than 20. The shares, after a good run, are now suffering.

Paterson Zochonis rises 15%

Paterson Zochonis, the detergents manufacturer, was bullish yesterday about prospects as it announced a 15 per cent increase in interim pre-tax profits to £13.6m.

The increase was achieved on sales 3 per cent ahead to £126m for the six months to November 30.

The company said it was confident that, harring any unexpected currency movements, it would increase profits from last time's £25.3m in the year to May 31. The interim dividend was increased by 4 per cent to 2.45p. Earnings were 18 per cent higher at 17.69p.

During the first half, profits were helped by lower interest charges, an increased contribution from associates and an improved operating return.

Interest charges fell by 18 per cent to £2.74m, while the contribution from associates rose by £600,000 to £1.83m.

The company said trading in parts of Africa was becoming increasingly difficult, particularly in Nigeria, the Congo and Cameroon.

In Europe, Paterson increased sales of Cussons soaps and toiletries in a competitive market. The Polish detergents manufacturer returned an encouraging performance, the company said.

Rights bolsters Wassall advance

By David Wighton

Wassall, the conglomerate which lost the bid for Evode last year, saw pre-tax profits jump from £17.8m to £27.6m in 1993 on sales up 11 per cent to £277.8m.

Profits were boosted by the £103m rights issue launched to fund the thwarted Evode bid. But the issue diluted earnings per share which rose 23 per cent to 11.7p.

Mr Chris Miller, chief executive, said that earnings per share would have been 11 per cent higher but for the rights issue, though they were lifted 8 per cent by exchange rate movements.

The loss of Evode, where Wassall was outbid by Laporte, has been followed by further disappointments, including abortive talks with Fenner. "We have got quite close to a number of things but most failed for price-related reasons," said Mr Miller.

"We are as confident as you can be that there will be an acceptable deal in the not too distant future," he added.

Although Wassall is still viewed as an

acquisition-driven group, Mr Miller pointed to the strong organic growth shown by the 32 per cent increase in operating profit to £27.3m. "That suggests there is something we are doing that is not straight asset-stripping."

He said the improvement was "particularly satisfactory" given that most of its markets outside the US experienced little or no recovery last year.

Even in the US, its DIY products supplier DAP has had to work hard to increase sales and most of the advance came from higher margins. Its operating profits rose from £10.5m to £13.7m, on sales £20.7m higher at £146.7m.

Metal Closures, the bottle top manufacturer which was the group's first large acquisition, continued to make good progress. The South African arm, which contributes nearly 30 per cent of group profits, had an "excellent" year in difficult conditions and the division's profits rose to £12.2m (£9.2m) on sales of £82.1m (£76.6m). A final dividend of 2.4p gives a total up

36 per cent at 3.4p (2.5p).

COMMENT

It may be that the ex-Hanson men who run Wassall are just too choosy when it comes to buying companies. But then they can afford to be. Their past acquisitions are still generating the sort of improvements that most "growth" companies would kill for. Perhaps most remarkable of all is the progress of Metal Closures' South African business, where profits have risen from £1.5m to £2m since Wassall bought the company in 1990. This exposure may unseat the nervous, though Mr Miller points out things would have to get pretty bad to hit sales of bottle tops. The real worry is Wassall's inability to find an earnings enhancing acquisition despite the low returns on its cash pile. Without some action before long, the shares' deservedly high rating will be hard to sustain. On current year forecasts of about £31.5m the shares at 285p, up 10p, are on a multiple of over 22.

Tiphook's shares rise on container sale completion

Shares in Tiphook rose by 3p to 55p yesterday after the debt-laden transport leasing group confirmed the completion of the sale of its container business to Transamerica, the US financial services group, writes Andrew Bolger.

Proceeds of £873m were received yesterday by Tiphook, which could receive a further £45m from the deal.

The final consideration

depends on changes in the net assets of the container operations between September 30 and yesterday, and is subject to a completion audit.

Tiphook, which had debts of more than £1bn, had warned that its survival depended on the successful disposal.

Completion of the sale was conditional on consents by a majority of the group's US bondholders.

GKN 90.9% acceptance in loan stock rights issue

GKN yesterday announced it had received acceptances in respect of almost 50m units of non-interest bearing convertible loan stock, representing about 90.9 per cent of the units offered in its recent rights issue.

The units are priced at 480p apiece and are payable in two equal instalments.

Subscribers have been procured at a premium for the

4.83m units for which valid acceptances were not received. The second instalment of 240p per stock unit remains conditional on the offers for Westland becoming wholly unconditional and GKN achieving 75 per cent ownership of Westland.

SG Warburg is acting for GKN in connection with the offers and the rights issue.

Holders bid to oust Andrews Sykes board

By Tim Burt

Rebel shareholders at Andrews Sykes, the loss-making industrial services group, yesterday launched a bid to oust the board in a re-run of a similar coup attempt 18 months ago.

Dissidents led by Mr Jacques Murray, who holds 29.2 per cent of the Midlands company, have called an extraordinary meeting at which they hope to win management control.

A spokesman for Mr Murray, chairman of Nu-Swift, the fire protection group, said the move reflected dissatisfaction with Sykes' performance.

Last December, the group reported interim pre-tax losses of £2.34m (£202,000 profit).

"We want to support the company and bring about an improvement," Mr Murray's spokesman added.

Mr David Hubbard, group chairman, said the board would fight the rebel action and would seek the support of institutional shareholders.

Opposition by institutional investors defeated Mr Murray 18 months ago after the last battle for control. Andrews Sykes has now offered Mr Murray board representation, but not majority control. His spokesman said the offer had not been rejected, but described the extraordinary meeting as a parallel tactic.

Andrews Sykes shares closed up 3p at 90p.

Visa EMEA spending rises 13% to \$183bn

By Alison Smith

The amount of spending using Visa cards within the Europe, Middle East and Africa region (EMEA) totalled \$183bn (£125.3bn) in 1993, some 13 per cent higher than in 1992.

The number of Visa EMEA card transactions rose by almost 5 per cent to 2.36bn, while the number of Visa cards in existence rose by more than 5 per cent to 70.8m.

Mr Jean-Jacques Desbons, president and chief executive of Visa EMEA, said the organisation was confident that growth "will continue throughout the next year and will increase further as the world economy starts picking up."

Both the increases in card-

holder spending in terms of US dollars and in the number of cards in 1993 against the previous year are lower in percentage terms than annual increases since 1989.

Mr Desbons also said Visa planned to introduce its Electron card into the UK before the end of the year. It is already available elsewhere and can be used only through electronic means. Because each transaction would be authorised individually by the banks, the card would offer greater security, and so banks might be prepared to make it available to more of their customer base than existing cards.

Visa EMEA represents about 36 per cent of Visa International's worldwide sales volume.

NEWS IN BRIEF

BARING SECURITIES Emerging Markets Index Tracker Fund: Net asset value at December 31 \$14.67 (£10) against \$10.50 issue price. Net realised gain for period April 15 to December 31 1993 \$814,000.

BEAUFORD has received valid acceptances in respect of 6.84m ordinary shares allotted by rights, representing 76.37 per cent of the issue.

BORTHWICKS has made two property disposals for \$600,000 in line with book value.

BURMINE has received valid acceptances in respect of 19.3m Europa Minerals Group ordinary shares (78.5 per cent) and has extended its offer to March 29. Acceptances of the linked Austmin offer had been received in respect of 45.1m fully paid ordinary shares, (63.9 per cent).

BWD SECURITIES, Yorkshire-based financial services group, has completed a contract to purchase a freehold office building being constructed in Sheffield for £559,300.

CANNON STREET Investments has sold Thierry's Wine & Food Services for a nominal consideration to Mr Thierry Cabanne and Mr John Hayston who are directors of Thierry's. **CENTRAL EUROPEAN** Growth Fund has received applications in respect of 24.7m ordinary shares (with warrants attached). Accordingly, the international placing has been increased and 175m ordinary shares (with warrants) have been placed firm, making the total size of the issue 200m shares (with warrants). Some \$200m (£137m) has been raised. Dealings are expected to start on March 21.

COUNTY SMALLER Companies Investment Trust: 4.97 per cent of open offer of C shares taken up. The placing and open offer raised a total of £35.8m. Change of name to Nat-West Smaller Companies Investment Trust agreed. **CRAY ELECTRONICS** has sold Nexus Custom Electronics to Jaco Electronics for \$1.6m (£1.1m).

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COMPANY NEWS: UK

Evans Halshaw beats forecast with £7.81m

By Paul Cheeseright,
Midlands Correspondent

Evans Halshaw, the Birmingham-based motor distribution and vehicle management group, yesterday delivered its promise of a fourfold increase in 1993 profits and prompted a 17p rise in the share price to 549p.

It announced pre-tax profits of £7.81m for the 12 months to December, compared with £1.71m for 1992.

Last November, when the group bought TR Motor Group, it forecast 1993 profits of £7.5m.

Earnings per share climbed from 5.4p to 24.3p, providing cover of 1.36 times for the increased dividend.

The proposed final is 9.3p (7.85p), making a total of 13p, against 11.35p for 1992 when payments to shareholders were partially financed from reserves.

Turnover rose from £341.5m to £404.7m as the new and used car market revived. New car sales were 38 per cent ahead and used car sales 16 per cent ahead of 1992.

However, the staple source of Evans Halshaw's profits - the servicing, parts sales and



Geoffrey Dale: car sales buoyant in 1994 so far

accident repair market - was flat until towards the end of the year.

This after-market provided 82 per cent of group profits, compared with 70 per cent in 1992. There was no absolute decline of earnings from the after-market, but its share of group profits fell because earnings from car sales rose.

Capital investment, notably in a second motor vehicle at Solihull, West Midlands, where five dealerships are grouped together, totalled £5.1m last

year. Mr Geoffrey Dale, chairman and chief executive, expects spending this year to be slightly less.

"Across the group, car sales have been buoyant in the first two months of 1994 and our trading results are significantly ahead of the same period last year," Mr Dale said.

● **COMMENT**
Evans Halshaw is riding up the economic cycle and its profits would no doubt increase even if it did nothing except avoid silliness. In fact, it is expanding into a fragmented market with costs already pared. It is now obtaining the benefits of its investment of the last two years. Solihull alone this year should sell 5,000 cars. It is developing other streams of revenue like the sale of fleet management software. It is unrealistic to expect another fourfold profits increase, but feasible to think of pre-tax profits this year pushing towards £13m to give earnings per share of about 40p. On a prospective multiple of less than 14, it looks as if they have some way yet to motor, always providing that economic recovery is sustained.

Wainhomes share issue priced at 170p

By Andrew Taylor,
Construction Correspondent

Wainhomes, the Chester-based housebuilder, yesterday announced details of its plans to raise £30.6m from a flotation and offer for sale at 170p a share.

The total amount to be raised is £41.9m including the sale of 5.8m shares by existing institutional shareholders.

The issue will give the company a market value of about £106m. It plans to place 18m shares mostly with institutions while offering a further 8.62m shares for sale to the public. After the sale it will have 62.24m shares in issue.

Wainhomes is forecasting earnings of not less than 9.3p per share for the year ending March 31, putting the group on a p/e of 18.3 times the issue price.

It said that if it had been already quoted it would have recommended a total dividend of 4.2p net, representing a notional gross dividend yield of 3.1 per cent.

The company is the latest in a growing list of UK housebuilders to issue shares to finance land purchases to take advantage of the housing market recovery. It is forecasting pre-tax profits of £6.1m for the year to the end of March, a 15 per cent gain on the previous year's £5.3m.

It expects to have sold about 950 homes by the end of March, which should rise to between 1,200 and 1,500 next year, before increasing to 1,600. The company will use the proceeds to repay borrowings - currently £17m - and to buy land.

● **COMMENT**
On the basis of earnings and yield the offer price of 170p is at a slight premium to Beazer, a large proven housebuilder, which announced its flotation terms last week. Wainhomes as a small provincial builder however, has more to gain from increased volumes - and its margins stand comparison with the better builders. Given market demand for the sector, both Beazer and Wainhomes issues should succeed.

Ransomes £8.9m into the red

By Tim Burt

Ransomes, the manufacturer of grass-cutting equipment, yesterday reported abysmally increased losses as it struggled with the twin burdens of large-scale restructuring and heavy debt.

The two factors led to pre-tax losses of £8.9m in the 12 months to December 31, compared with a restated 1992 deficit of £800,000.

Mr John Clement, chairman, blamed the decline on a restructuring programme involving a 12 per cent cut in the workforce, the removal of a tier of senior management and the contraction of its operating divisions.

The programme led to a threefold increase in excep-

tional charges to £5.8m.

Operating profits, meanwhile, fell by 35 per cent to £5.3m amid intense competition in the US and flat sales in Europe.

The figures were dented further by interest charges of £3.4m (£2.7m) on net borrowings of £75.3m (£76.1m), representing gearing of 450 per cent.

Despite the problems, Mr Clement, who took over as chairman last October, said its principal bankers had agreed to maintain existing borrowing facilities of £120m.

They have also backed moves to reshape the group by Mr Peter Wilson, appointed chief executive last autumn.

Mr Wilson initiated the redundancy programme, closed some overseas facilities and

reorganised group operations in two new divisions - commercial and consumer.

Profits in the commercial operation fell sharply to £1.76m (£7.11m) following the group's failure to exploit market opportunities - particularly among golf course operators. Its poor performance was offset by increased demand in the consumer division, which saw operating profits increase 25 per cent to £3.52m.

Group turnover rose slightly to £165.8m (£156.6m).

Losses per share worked through at 26.1p against a restated 11.5p.

The company, which omitted its interim dividend, is also passing the final on both its ordinary and cumulative preference shares.

● **COMMENT**

Ransomes is paying the price for its dash for growth in 1989 when it acquired Cushman, the US grass machinery group, for £150m (£103m). Although, the new management has begun to tackle the debt burden left by that purchase, it faces an uphill struggle. The pressure has been increased by its decision to change the year end to September, leaving only 10 months to produce some positive results. Nevertheless, it claims to have already stripped out £10m of costs in the US and £1.5m at home. Analysts, who were unwilling to make profit forecasts, warned the group would have to make operating gains of more than £5.7m just to pay its dividend liability and generate earnings per share.

Poland's biscuit market crumbles to McVitie's

By Christopher Robinson
in Warsaw

A large share of Poland's biscuit market yesterday fell to McVitie's, a United Biscuits subsidiary, when the biscuit and snacks producer agreed to pay £15.1m for 90 per cent of the San factory in Jaroslav, the country's last large biscuit plant still in state hands.

Last year Jacobs Suchard bought the Olza plant in Cieszyn, while Bahlsen, a German snack producer, took control of Skawina, another biscuit producer in southern Poland.

These purchases came as PepsiCo Foods International was developing its bourse-listed Wedel chocolate factory,

bought in 1991, into a salty snacks producer which looks set to double its 1993 net profit of \$300m to \$600m (£9.7m) this year.

Both RJR Nabisco and PepsiCo bid for San, which reported a £1.2m net profit last year, as did the French BSN food group which has yet to purchase a snacks plant in Poland.

Mr Hartwig Conzelmann, of McVitie's said yesterday that his company was planning to build on San's 20 per cent market share and "dominate the country through a new nationwide marketing network".

Yesterday's agreement also spoke of plans for expansion from San's base in south east Poland into Belarus and the

Ukraine and the company is considering building a salty snacks plant.

McVitie's intends raising San's capital by \$6.7m this year and investing a further \$3.8m over the next two years. It will be preparing a prospectus for a Warsaw stock market listing within nine months and the \$6.7m capital increase could well come from the local capital market. McVitie's has promised to retain a 51 per cent in San for three years.

The Central European Trust advised the Polish government on the transaction while McVitie's was advised by Schroders.

McVitie's bought Gyori Keksz, Hungary's largest biscuit company in 1991.

Lionheart back in black with £1.77m

Lionheart, the Cheshire-based paint brushes and housewares group, returned to profit in 1993 with £1.77m pre-tax, a £2.64m turnaround on 1992's deficit of £870,000. Mr Paul Lever, chairman, said an acquisition was now likely within months, writes Ian Hamilton Fazzey.

Turnover rose by 7 per cent to £46.7m (£43.6m), giving a profit-to-sales ratio of 3.8 per cent. With earnings per share of 0.49p (losses 0.59p) a final dividend of 0.2p is proposed making 0.3p (0.2p) for the year.

The group returned to the dividend list only two years ago after reconstruction under Mr Lever, the chairman and former chief executive of Crown Paints.

Talks are understood to have begun about an acquisition with an announcement in the first half of the current year.

Hall Engineering leaps to £8.6m and lifts dividend

By Andrew Baxter

Hall Engineering (Holdings) yesterday announced a sharp rise in 1993 pre-tax profits from a restated £2.26m to £8.56m and is raising its dividend for the year by 10 per cent to 9.5p, with a final of 3.02p.

The Shrewsbury-based metal stockholding, steel products and automotive engineering group benefited from higher margins in its steel reinforcement business, especially in the first half, the completion of its UK rationalisation and another rise in profits from associated companies in the Pacific Rim.

Pre-tax profits for 1993 have been restated for FRS 3, and

would have been £5.6m on a pre-FRS 3 and pre-exceptional cost basis.

Sales last year rose 8 per cent from £135.7m to £146m, and also by 3 per cent, to £182m, if share of associates' sales is included.

Earnings per share rose to 19.18p, against 3.06p in 1992 when there was a loss per share of 1.67p under the basic calculation including exceptional items.

In metal stockholding, losses were cut by £800,000 to £133,000, while the steel reinforcement business turned a £1.5m loss into a £82,000 profit.

Profits in the engineering division fell by £1m to £3.2m.

and redundancy costs in Stado's pressings division. Profits in the automation division were slightly ahead.

Mr Richard Hall, chairman, said the takeover of Rover by BMW could help Stado win business for the first time from the German car group, and Stado's recently announced joint venture with Honda Engineering would not be affected.

On the outlook, Mr Hall said he would be very disappointed if the company could not further improve profits slightly this year. In some businesses, confidence is much higher than at the same time last year, although others are still indirectly affected by the recession in continental Europe.

Accounts filed at Companies House disclose for the first time the financial scope of the project to develop a new range of Aston Martin sports cars, the DB7, which are due to enter production next month.

Ford has injected £50m in new equity to fund the peak financing requirements of the DB7 programme, in the process lifting its shareholding to 99.5 per cent.

The DB7 programme has imposed a heavy burden on Aston Martin Lagonda's finances.

The group's losses in the last two years - £18.9m in 1993 and £16m in 1992 - were incurred after charges to the profit and

A £50m magic wand from Ford

Kevin Done on plans to revive the ailing Aston Martin Lagonda

Ford, the US motor manufacturer, is planning to transform the fortunes of Aston Martin Lagonda, the UK luxury sports car maker in which it acquired a 75 per cent stake in 1987.

Accounts filed at Companies House disclose for the first time the financial scope of the project to develop a new range of Aston Martin sports cars, the DB7, which are due to enter production next month.

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The group's losses in the last two years - £18.9m in 1993 and £16m in 1992 - were incurred after charges to the profit and

loss account for the development of the DB7 totalling £13.7m in 1993 and £6.6m in 1992, including £2.1m for the original feasibility study.

The DB7 programme has led to a far-reaching reorganisation of the group.

The board now includes Mr Jackie Stewart, the former Formula 1 world champion, and Mr Nick Scheele, chairman and chief executive of Jaguar, and Mr Tom Walkinshaw, whose TWR motor sports engineering group has played a significant role in the DB7 project.

The Aston Martin Lagonda group accounts disclose that JaguarSport, a 50/50 Jaguar/TWR joint venture of which Mr Walkinshaw is a director, was paid £10.1m in 1993 and £5.3m in 1992 for providing engineering services for the development of the DB7.

Jaguar is 100 per cent owned by Ford.

The new Aston Martin sports car, expected to sell for below £50,000, is heavily dependent on outside suppliers.

Body panels and welded bodies are to be supplied by Motor Panels, a subsidiary of the Mayflower specialist automotive engineering and design group.

The bodies will be painted by Rolls-Royce Motor Cars' plant at Crewe, Cheshire, and the cars will be assembled at the plant in Bloxham, Oxfordshire, which has previously built the Jaguar XJ220 super car.

The plant will be taken over this year by Aston Martin Lagonda. The DB7 engines will be assembled by TWR.

Last year Aston Martin produced only 144 cars at its Newport Pagnell plant in its traditional Virage/Vantage range, which sell from £134,000 to

£178,000, but the group's output is now forecast to increase fivefold with DB7 production set to total 600-700 a year.

Output of the DB7 starts next month with deliveries beginning in the UK in the summer and in the US and Canada in the autumn of 1995. Output next year is expected to total 625.

While the DB7 has been under development the existing Aston Martin business based on the Virage/Vantage range has been under heavy pressure as a result of recession in the US and UK.

Turnover fell from £27.3m in 1990 to £20.8m in 1991 and £12.4m in 1992, although sales began to recover to £15.9m last year with a pick-up in both the UK and the US. The workforce has been drastically reduced to an average 285 last year from 359 in 1992, 448 in 1991 and 522 in 1990.

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Invitation to the Annual General Meeting

Notice is hereby given that the Annual General Meeting will be held at 10.15 a.m. on Tuesday, 26 April 1994, at the Jahrhunderthalle Hoechst, Frankfurt am Main

Agenda

1. Presentation of the approved annual financial statements, the Group financial statements as well as the summarized management reports of Hoechst Aktiengesellschaft and the Hoechst Group for the financial year 1993, together with the report of the Supervisory Board

2. Resolution on the appropriation of retained earnings

It is proposed to pay a dividend of DM 7.- per share of DM 50.- nominal value.

3. Ratification of the acts of the Board of Management

4. Ratification of the acts of the Supervisory Board

5. Election to the Supervisory Board

6. Election of the auditors for the financial year 1994

The full agenda, including the proposed resolutions, is contained in the Bundesanzeiger no. 52 of 16 March 1994.

Shareholders wishing to be present and to vote at the Meeting must comply with Article 14 of the Articles of Association and deposit their share certificates during usual business hours by Tuesday, 19 April 1994, at the latest until after the Meeting, at one of the depositories listed in the Bundesanzeiger no. 52 of 16 March 1994, or, in the United Kingdom, at the offices of

S. G. Warburg & Co. Ltd,
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Hoechst Aktiengesellschaft
Frankfurt am Main,
March 1994

Hoechst

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Dividend increase reflects company's optimism on prospects Delta falls slightly to £53.4m

By Andrew Bolger

Delta, the cables and engineering group, reported flat annual results yesterday, but signalled guarded optimism about the economic outlook by increasing its dividend for the first time since 1989.

Pre-tax profits dipped from £55.1m to £53.4m in the year to January 1, mainly because of higher interest charges following its \$37m purchase of the outstanding 36 per cent stake in Delta Crompton Cable Holdings from BTR, the industrial conglomerate. Sales rose from £786m to £833m.

Earnings per share increased marginally to 23.1p (23p). A final dividend of 10.3p lifts the total to 33.4p (33p).

Mr Robert Easton, chief executive, said Delta was one of the first UK companies to freeze dividends as the downturn took hold, but now hoped it had seen the bottom of the recession in continental Europe.

The upbeat tone was carefully qualified by Delta, which in September saw its shares marked down sharply after it warned that the UK recovery in manufacturing was more anaemic than many observers were suggesting.

Mr Geoffrey Wilson, chairman, said yesterday: "Whilst current patterns of demand

remain patchy, early indications suggest a strengthening in some sectors. Whilst we have seen transient effects before, there is now greater evidence to suggest that the economic tide may be finally on the turn."

Delta said it was another tough year, with continuing depressed and fiercely competitive trading. European construction markets showed little recovery.

Mr Wilson said: "Early signs of more encouraging activity in the UK soon relaxed and demand then persisted at depressed levels. Prices remained under pressure, particularly in cables."

Delta shed 800 jobs last year, bringing the total employed down to 12,300. The group has cut its workforce by a third since 1989. Mr Easton said he would "go on trimming - but the battle will moderate."

The cables division suffered particularly from UK price wars, with operating profits down to £2.9m (£3.6m). Circuit protection dipped to £15.8m (£17.1m) and engineering to £19.9 (£22.2m). Industrial services, however, rose to £18.5m (£12.8m).

COMMENT
Actions speak louder than words, and Delta's willingness to let dividend cover fall to 1.5



Robert Easton: hoping he had seen the bottom of the recession

strikes a more positive note than the chairman's heavily hedged statement on prospects. Analysts were struck by how tough things were in the cable market, but still believe Delta's willingness to reduce its cost base makes it heavily geared to any upturn. Action, rather

Crockfords gambling profits rise 16%

By David Blackwell

Crockfords, the casino company that was reversed into TV-am last summer, lifted profits from its gambling business by 16 per cent in 1993. Operating profits from the continuing gambling side rose from £19.9m to £22.9m on gaming turnover up from £44.4m to £51.3m.

At the pre-tax level profits for the year to end-December were £22.2m against £38m in 1992, with the 1992 figure including £15.7m of operating profits from TV-am, which stopped broadcasting on December 31 1992.

Crockfords opened London's first legal casino in Curzon Street in 1991. Last August the company reversed into TV-am, which had lost its licence and was planning a voluntary liquidation.

Mr Garry Nesbitt, chairman, said the group was firmly established at the upper end of the London gaming market.

While the number of casinos in London was unchanged at 21, the total gaming income was 34 per cent ahead at £304m. "I believe that a significant proportion of this increase may have been from the higher value players for whom we cater," Mr Nesbitt said.

Basic earnings per share were 16.1p (24.05p).

A final dividend of 2.5p is proposed for the first four months of the year, equivalent to 7.5p for the full year.

Mr Nesbitt said the strategy was to develop the existing club, on which £700,000 was spent last year, and to look out for other London casinos. It would also be seeking acquisitions or start-up opportunities "in Europe and other overseas areas where gaming is well regulated".

COMMENT
Profits at Crockfords depend on a small number of big hitters - the prospects said that over three years ten exceptional players had accounted for 50 per cent. Clearly the company needs at least one more casino to diversify its risks. But it is highly cash generative and, unencumbered, should be able to move quickly once an opportunity arises. Given the same level of business this year earnings could reach more than 16.5p. A dividend of 8p would represent a yield of more than 6.5 per cent - worth the gamble.

Heywood Williams in sixfold rise to £35.2m

Andrew Taylor, Construction Correspondent

Pre-tax profits of Heywood Williams Group, the building and automotive components group, rose more than six times in 1993 from £5.5m to £35.2m.

The company was assisted by significant gains following a series of disposals and acquisitions. Operating profits, even after stripping out these benefits, still rose by 86 per cent from £2.02m to £3.59m.

The £50m sale of the group's UK glass division to Pilkington added a further £15m to these profits. Another £2.95m came from the first six months earnings of LaSalle-Deitch, which supplies components and furnishings for manufactured homes in the US.

Interest on Heywood's cash balances, currently about £10m, increased pre-tax profits by another £500,000, compared with a debit of £3.02m.

Bridgewater, the UK automotive glass replacement busi-

ness acquired last autumn, and which is in the process of being re-organised, also contributed a small profit.

Since the year end Heywood has completed the acquisition of Bristol Products, the US plumbing components supplier, for \$81.2m (£53.4m). The purchase was funded by a rights issue which raised £52.4m at the end of last year.

The company, as forecast, is paying a final dividend of 8.5p (8p) making a total for the year of 13p (12.5p), the first dividend increase for two years.

Earnings per share were 36.2p (1.7p) or 32.9p (1.7p) diluted or 15.5p (1.7p) before exceptional profit on the disposal to Pilkington. Turnover fell from £389.5m to £385.6m.

The shares following the announcement rose 7p to 437p compared with a rights issue price in December of 289p.

Mr Ralph Hinchliffe, chairman, said: "The sale of the under-performing UK glass businesses, and the acquisitions we have made to secure

and strengthen key market positions in the more buoyant US manufactured housing and recreational vehicles markets, has transformed our prospects."

COMMENT

The tide is starting to turn in favour of Heywood Williams' main markets. US housing and automotive businesses, accounting for almost half of group turnover, are growing stronger as the economy recovers. Bad winter weather, also, will have had less of an impact on manufactured homes than on general housebuilding. In the UK, the homes market should continue to improve, while increased investment in deposits should offset any temporary softening of the market following last year's introduction of windscreen checking in MOT tests. Pre-tax profits could approach £40m this year. A quality management and strong balance sheet makes the company worth an investment at this level.

Cost cutting helps lift Scholes 84%

By Simon Davies

Scholes Group, the electrical installation equipment group, yesterday announced an 84 per cent increase in pre-tax profits from £1.3m to £2.4m for the six months to December, despite a marginal increase in UK sales.

Turnover rose 5 per cent to £31.1m, but this was boosted by exports, which increased by 21 per cent to £3.8m and now account for 12 per cent of group sales.

Scholes' earnings growth was achieved primarily through further lowering of the company's cost base, but also through some price increases in its major business, manufacturing switchgear for the domestic housing market.

Operating profit margins increased from 8.5 per cent to 8.3 per cent at the interim stage, and Mr Bill Riches, chairman, said he was confident further operational streamlining could be achieved.

Mr Riches said: "Management continues to focus on lowering the group's cost structure and pursuing ways of enhancing manufacturing productivity."

He said it would be tough for the company to achieve further price increases, however, due to increasing competition from European manufacturers prepared to buy market share at the expense of profit margins.

The company remains cash positive, and its net cash position increased by 37 per cent to £2.2m in December.

Scholes also announced that it had agreed to sell its 17 per cent stake in Malaysian-listed PWE Industries.

The company will pay an interim dividend of 1.7p (1.9p). Earnings per share increased from 2.4p to 4.3p.

Improved production helps Aviva cut losses to \$2.63m

By Peggy Hollinger

Aviva Petroleum, the small US-based oil and gas explorer, quoted in the UK, yesterday announced sharply lower net losses of \$2.63m (£1.8m), against \$10.23m last year, because of improved production from the group's Colombian project.

The better result was achieved on virtually static oil and gas sales of \$10.68m, against \$10.42m last time.

The loss per share was reduced from 124 cents to 11

cents. As in the past there is no dividend.

Mr Ron Suttill, chief executive, said he was confident the group would be able to achieve profits in spite of a depressed oil price.

Aviva was aiming to break even by the end of the current year, he said.

He stressed the potential of further development of the Colombian project, jointly owned with Ecopetrol, the state energy company.

By 1995 Aviva hoped to earn some 34,000 barrels a day from

its share of the Colombian fields, which would result in a net cash flow contribution of about \$12m a year, Mr Suttill said.

Net production from Colombia increased by 54 per cent to 279,000 barrels during the year. Mr Suttill said the increase, combined with a 10 per cent rise in US gas prices, more than offset a decline in oil and gas volumes in the US and reductions in the US and Colombian oil prices. Currently all of Aviva's Colombian production is sold to Ecopetrol.

Seafield ahead to £1.62m

Pre-tax profits of Seafield Resources, the USM-quoted oil and gas exploration company, rose from £1.06m to £1.62m in the year to end-December.

At the operating level profits were up from \$252,000 to £1.8m. Turnover grew by 58 per cent from \$3.55m to \$7.74m, the bulk of which - \$5.8m - was generated in the UK from the group's 5 per cent interest in the Victor gas field.

As part of last year's overhaul of North Sea taxation rules, companies were prevented from offsetting exploration and appraisal spending against income from fields which incur Petroleum Revenue Tax.

Although the terms were ultimately modified to include a limited form of transitional relief, the outcome this time suffered from a surge in

the tax charge from £200,000 to \$967,000. This impacted on earnings, which fell from 1.7p to 1.3p.

Operating cash flow was up 82 per cent at \$4.94m (£2.65m).

Mr John Raitt, chairman, said that hydrocarbons had been encountered in all five UK wells in which the company participated.

Two of these wells were significant discoveries, and one successfully appraised an extension to the Victor field, confirming additional reserves.

The balance sheet remained strong with no debt, he added.

The company said it intended to apply for a full listing when the simplified, low cost, procedure for USM companies had been finalised.

Everest shares fall 9p on warning about static second half results

Shares in Everest Foods tumbled 9p to 68p yesterday after the West Midlands-based egg and chip producer said it was unlikely to achieve full year profits in accordance with market expectations.

Mr Bob Gilbert, chairman, said the trend towards economy products had resulted in

severe pressure on margins.

This meant that pre-tax profits fell from £1.18m to £1.06m in the six months to November 30, although turnover grew by nearly £3m to £19m.

The company had taken steps to make manufacturing processes as cost effective as possible. However, Mr Gilbert

warned that if current trading conditions persisted, full year profits were unlikely to improve substantially on this interim figure.

Although earnings per share slipped from 3.15p to 2.9p, the interim dividend has been held at 1.2p and a scrip dividend alternative proposed.

Graseby surges ahead to £9.57m

By Paul Taylor

Graseby, the medical electronics, product monitoring, environmental and defence technology group, yesterday reported sharply higher 1993 profits reflecting growing international sales, lower interest costs and the absence of exceptional charges.

Pre-tax profits for the year to end-December jumped to £9.57m from the depressed £1.02m recorded in 1992, when they were reduced by £4.3m of net exceptional costs.

Earnings per share jumped to 11.4p (1.3p) and in line with the board's previously announced decision, the final dividend is being reduced to 3.3p (7.9p) making a total for

the year of 6.5p (10.9p). The shares closed down 5p at 181p.

Turnover increased by 10.8 per cent to £113.7m (£102.6m) including £15.4m (£22.4m) from discontinued operations. Sales from continuing operations grew by 22 per cent to £98.7m with exchange rate movements accounting for just over a third of the increase.

International sales grew by 21 per cent, excluding exchange rate movements, reflecting the group's reduced dependence on the domestic market.

Operating profits increased to £11m (£7.85m) including a £501,000 contribution from discontinued operations. In 1992 discontinued operations reduced profits by £1.2m.

The advance was led by an exceptionally strong performance by the defence business, where a number of large orders were completed resulting in the technology division reporting profits of £4.2m (£371,000) on sales up 24 per cent to £34.3m.

In contrast, operating profits and trading margins slipped in the three other divisions despite increased sales.

Net interest costs fell to £1.4m (£2.83m) partly reflecting a decline in year-end borrowings from £20.7m to £15.9m, representing gearing of 68 per cent - down from 99 per cent.

COMMENT

Graseby has completed its transformation from a group

dependent on the volatile defence and component sectors to an international instrument supplier focused on four distinct value-added markets. The balance sheet is now in much better shape and borrowings should fall further - even without the deferred flotation of Graseby Anderson in the US.

Although several of its markets - including the UK medical market - face pricing pressures, the overall trading margin should edge higher again this year towards the group's 15 per cent target. Pre-tax profits of about £10m this year should provide earnings of about 11.7p. The shares are trading on a prospective p/e of 15.5 and look slightly undervalued.

This notice is issued in compliance with the requirements of the International Stock Exchange of the United Kingdom and the Republic of Ireland Limited (the "London Stock Exchange"). It does not constitute an invitation to any person to subscribe for or purchase any securities in M.A.I.D plc ("M.A.I.D"). Application has been made to the London Stock Exchange for all of the relevant shares of 1p each in M.A.I.D to be admitted to the Official List. It is expected that such admission will become effective and that dealings will commence on Friday 25th March 1994.

m.a.i.d. plc

Incorporated in England and Wales under the Companies Act 1985 with registered number 18902361

Placing by Hill Samuel Bank Limited
of 11,500,000 ordinary shares of 1p each at 110p per share
payable in full on acceptance

Share capital following the placing

Authorised			Issued and fully paid	
Number	Amount		Number	Amount
10,000,000	\$1,100,000	Ordinary shares of 1p each	81,036,810	£810,368.10

Copies of listing particulars relating to M.A.I.D may be obtained during normal business hours on any week day (Sundays and public holidays excepted) up to and including 18th March 1994 from the Company's Administrative Office of the London Stock Exchange, Stock Exchange Tower, Cayne Court Entrance, off Bankside Lane, London EC2N 2JP (for collection only) and up to and including 30th March 1994 from:

M.A.I.D plc
M.A.I.D House
111 Duffell Street
London EC1V 8PD

Hill Samuel Bank Limited
100 Wood Street
London EC2P 2AJ

Hoare Guvett Corporate
Finance Limited
4 Broadgate
London EC2M 7UE

Hill Samuel Bank Limited is a member of The Securities and Futures Authority

16th March 1994

ECU 15,000,000
SOPINLUX S.A. Luxembourg
Floating Rate Notes due 1999

Notice is hereby given that for the period 25th February, 1994 to 28th February, 1995 the notes will carry an interest rate of 6 1/16 % per annum. The interest payable on the relevant interest payment date 28th February, 1995 will amount to ECU 6,780,338 per ECU 100,000 nominal.

Paying Agent
Société Générale

LEGAL NOTICES

No 0010850 of 1993
IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION

IN THE MATTER OF HUSQVANA LIMITED
(formerly Husqva plc)

AND IN THE MATTER OF
THE COMPANIES ACT 1985

NOTICE IS HEREBY GIVEN that the Order of the High Court of Justice (Chancery Division) dated the 28th March 1994 confirming the reduction of the capital of the above-named Company from £2,525,000.00 to £1,876,148.70 and the Accounts approved by the Court showing with respect to the capital of the Company as altered the several particulars required by the Regulations of Companies Act 4 March 1994. Dated the 11th day of March 1994.

Bernie Laffington
Adelaide House
London Bridge
London EC2R 9JA
Ref. 11/20023
Solicitors for the above-named Company

PERSONAL

PUBLIC SPEAKING Training and speech-writing by award winning speaker. First lesson free. Tel: (0727) 561133

CROSBY SECURITIES

Mr J. Mark Martyrossian has been appointed Managing Director of Crosby Securities (H.K.) Limited. Mr Martyrossian, a qualified solicitor, practised in the corporate finance department of a leading City firm before completing an MBA at INSEAD. He has over seven years experience in Asian equity markets. He joined the main board of Crosby Securities two years ago and is also a director of two London listed investment trusts.

CROSBY SECURITIES

Fiduciary Issue by Kredietbank S.A. Luxembourg to fund a loan to be made by it to

ISVEIMER

Istituto per lo Sviluppo Economico dell'Italia Meridionale
Italian Lire 150,000,000,000
Floating Rate Notes due 1997

In accordance with the Terms and Conditions of the Notes, notice is hereby given that for the interest period from March 15, 1994 to June 15, 1994 the Notes will carry an interest rate of 8.9376 % per annum.

The Interest Amount payable on the relevant Interest Payment Date, June 15, 1994 will be ITL 114,221 per ITL 5,000,000 principal amount of Notes and ITL 2,284,028 per ITL 100,000,000 principal amount of Note.

The Agent Bank
Kredietbank S.A. Luxembourg

Alliance International Health Care Fund
Société d'Investissement à Capital Variable
47, Boulevard Royal
L-2449 Luxembourg
R.C. Luxembourg B25 105

NOTICE OF MEETING

Dear Shareholder,
We have pleasure in inviting you to attend the Annual General Meeting of shareholders, which will be held on Wednesday, March 30, 1994 at 2.30 pm at the offices of State Street Bank, Luxembourg S.A., 47 Boulevard Royal, L-2449 Luxembourg, with the following agenda:

AGENDA

1. To approve the annual report incorporating the auditors' report and audited financial statements of the Fund for the fiscal year ending November 30, 1993.

2. To discharge the Directors and the Auditors with respect to the performance of their duties during the fiscal year ending November 30, 1993.

3. To elect the following seven persons as Directors, each to hold office until the next Annual General Meeting of Shareholders and until his or her successor is duly elected and qualified:
R O Smart, CBE
J Kent Blair, Jr
S M Davies
David H Dievier
W H Henderson
Jean-Claude Koch
Edward J Loder

4. To appoint Ernst & Young, Luxembourg as independent auditors of the Fund for the fiscal year ending November 30, 1994.

5. To transact such other business as may properly come before the meeting.

Only shareholders of record on February 28, 1994 are entitled to notice of, and to vote at, the Annual General Meeting of Shareholders and at any adjournments thereof.

Should you not be able to attend the meeting in person, please date and sign the enclosed proxy and return it before March 15, 1994 by fax and by airmail in the envelope provided to State Street Bank, Luxembourg S.A., 47 Boulevard Royal, L-2449 Luxembourg, fax number +352 470204, tel +352 464010255, to the attention of Ferns Kline, to ensure that a quorum will be present at the meeting.

By order of the Board of Directors
Jean-Claude Koch
General Manager

Fundamental policy choice seen for EU farmers

By Alison Maitland

European farmers face a stark choice before the end of the decade between tighter restraints on the use of land and chemicals or the complete abolition of price support.

This is believed to be the central message of a detailed strategy document to be considered today by the council of the National Farmers' Union of England and Wales.

The NFU's long-term strategy group, which produced the report, believes the recent Gatt deal will lead to another major shake-up of the Common Agricultural Policy before 2000.

"Current CAP policies are not going to increase consumption or bring down the production of cereals and beef sufficiently to allow the EU to meet its obligations under the Gatt settlement," it says. "EU farmers are approaching a fundamental policy choice."

This runs counter to assurances from the European Commission and the UK government that no further fundamental changes will be needed in sectors subject to current CAP reforms to comply with EU commitments under the Gatt deal.

The report is understood to rule out the option of exit bonds, under which current agricultural support systems would be compensated with a fixed, finite payment, which would be tradeable.

The strategy group says this could push up the EU's annual spending on agriculture - currently Ecu2bn - by 60-70 per

cent in the short term and would be politically unacceptable because it would lead to high rural unemployment.

It also dismisses the extension of output quotas - such as those on milk - to new sectors, saying this would be complicated to administer and would conflict with the general reduction in government intervention in industry.

The choice, therefore, would be between tighter controls on inputs - for example, by increasing the amount of set-aside land or reducing the amount of nitrogen used - or abolishing the link between support payments to farmers and their production levels.

Farm incomes would be better protected under a system of input controls, assuming those would continue to be accompanied by subsidised exports and import tariffs. "But they may not be sustainable (beyond the 1990s) if future Gatt rounds force lower levels of border protection and export subsidies," says the report.

The coupling option would expose EU farmers to competition with world prices, putting the full burden of support payments on the taxpayer. The report suggests EU cereal prices could fall by a further 30 per cent before reaching world price levels and that this might entail an unacceptably high level of compensation.

The NFU plans to consult its 100,000 members, as well as the government, the wider agricultural industry and other European farming groups, in the difficult task of achieving a consensus on future strategy.

'Green' paper makers find themselves out of pocket

Buyers are reluctant to pay adequate premiums for the chlorine-free product, writes Bernard Simon

The environmental movement has for years pressed pulp and paper mills to cut their use of chlorine, which they claim is necessary to produce strong, bright paper.

A growing number of producers, especially in Europe, have gone all the way, sensing a strong resistance among their customers to environmentally harmful processes, some mills have spent heavily on processes that completely eliminate chlorine as a bleaching agent in pulp and paper production.

Questions are now being raised however, whether the producers have gone too far. Evidence is mounting that customers are reluctant - at least for the time being - to put

their money where their mouths are.

Chlorine-free papers are not commanding the premium prices producers expected, and which are required to recoup their sizeable investments in a pioneering technology.

Doubts about the market's willingness to pay for the ultimate in environmentally friendly paper are especially evident in North America, where the vast majority of producers is strongly resisting pressures to move towards the elimination of chlorine from pulp-making processes.

Mr Matthew van Hook, vice-president of the American Forest and Paper Association's pulp group, told the AFPA's annual meeting last week that "the jury is still out on the

environmental impacts of totally chlorine-free (TCF) processes themselves, not to mention their technological and economic feasibility".

Chlorine owes its popularity as a bleaching agent to its ability to remove unwanted resins and fatty acids from wood pulp while leaving intact the cellulose fibres required for paper-making.

But chlorine is also a heavy polluter, adding toxic by-products such as dioxins and chlorinated organic compounds, known as AOXs, to pulp mill effluent.

It has increasingly been supplanted as a bleaching agent by hydrogen peroxide, supplemented in some cases by an ozone-bleaching process and by enzymes.

Chlorine-free pulp is especially popular in Germany, where the environmental crusade against the forestry industry is strongest.

Germany, Switzerland and Austria consumed almost 1.5m tonnes of totally chlorine-free (TCF) pulp last year out of total European demand of about 3.1m tonnes. Jaakko Poyry, the Finnish forest-products consultancy, predicts that European demand will jump to between 5m and 6m tonnes by the end of the decade.

For the present however, supply exceeds demand. Prices for northern bleached softwood kraft pulp, the industry staple, are currently around \$450 a tonne.

Mr Martin Granholm, president of Kymmene, the Finnish

forest-products group, says that the present premium for TCF pulp is only about 10 to 15 per cent, which is well below the figure of some \$130 a tonne that forestry companies say they require to reimburse the extra expense of installing non-chlorine bleaching equipment.

In a speech at last week's AFPA meeting, Mr Granholm said it was "quite probable that some over-capacity will be created in Europe for TCF pulps. This is predicted to lower the price premium that TCF pulps have had".

Only one mill in North America, a 700-tonnes-a-day facility in California operated by Louisiana-Pacific, at present produces totally chlorine-free pulp. One-fifth of its 1993 out-

put was chlorine-free, and it is scheduled to be in continuous TCF production by September 1995.

The mill's environmental benefits are undeniable. Its effluent has a hazy, pale yellow tint, compared to the coffee-coloured waste spewed out by mills using chlorine. The levels of toxic AOX and dioxins are so small as to be virtually immeasurable.

But Louisiana-Pacific is far from recouping its investment of about \$100m. Weak demand forced the mill to close during the last few months of 1993. It reopened in January and produced TCF pulp for just over a month before being shut down again on March 2. The company has yet to decide when it will restart.

Malaysian rubber and tin output decline further

By Kieran Cooke in Kuala Lumpur

Malaysia's declining role as a commodity producer is highlighted by statistics released here on 1993 rubber and tin production - two commodities in which, until fairly recently, Malaysia led the world.

The Malaysian department of statistics says the country's total natural rubber production in 1993 was 1.07m tonnes, a drop of 98,000 tonnes, or 8 per cent, from the 1992 figure. Within that smallholder output declined 7 per cent while estate production dropped 12 per cent.

Exports of natural rubber also dropped - by 9 per cent to 937,000 tonnes.

The decline in tin-in-concentrates production was sharper, by 28 per cent to 10,384 tonnes in 1993.

Malaysia's industrialising fast and commodities are playing a decreasing role in the overall economy. Serious labour shortages and low prices are also forcing people to abandon labour intensive agricultural activities.

A surge in car sales in the US is being seen as the main reason for a rally in natural rubber prices which, after several months in the doldrums, reached a five-year high on far eastern markets last week. Traders say supply due to prolonged monsoon rains in rubber producing areas has also helped prices.

Compiled from Reuters

Brazil seeks markets for orange juice

US imports are expected to fall further, writes Ronald van de Krol

Brazil, the world's biggest exporter of frozen concentrated orange juice, with a commanding 86 per cent share of the international market, will need to step up its sales efforts in Europe and Asia to compensate for further declines expected in exports to the US.

Mr Rodrigo Citra, president of Camunhy Citrus, one of Brazil's largest orange-processing companies, believes that the country's share of the US market is likely to fall to between 5 and 10 per cent by the end of the decade, partly as a result of the recently agreed North American Free Trade Agreement. This compares with the heyday of Brazilian exports to the US in the 1970s, when 60 per cent of Brazil's total production of frozen concentrated orange juice was sold in North America.

"Florida and Mexico, which has been granted special tariff conditions under Nafta, will certainly be able to supply almost all of North America's demand," he told an interna-

tional fruit conference last week in Rotterdam.

Speakers at the conference, which was organised by the port of Rotterdam and Rabobank, the Dutch bank that specialises in agri-business, said that the world's fruit sector also faced challenges caused by changes in the way fruit and fruit juices were marketed.

Increasingly, fruit growers and food retailers were attempting to eliminate "middlemen" such as brokers, import agents, packers and wholesalers.

Mr Braga said the decline in orange juice sales to the North American market over the past few decades was probably irreversible, meaning that Brazil would have to concentrate on Europe, already its biggest market, and on new markets in Asia such as Korea.

Despite sharp increases in exports to Europe, there was room for further growth, he said, because consumption of fruit juice was barely half the US figure of 29 litres a person a year. In some countries, such as France, Italy and Spain, con-

sumption is still in single digits.

Consumption in Asia is low in absolute terms but rising rapidly.

"It took us 15 years to see Europeans consuming orange juice at half the levels of Americans," Mr Braga said. "We might be able to get south-east Asia to that level in half that time."

Besides shifts in trade flows, Brazil and other fruit producers are grappling with the shake-up in traditional relations between food retailers and food suppliers.

The rise of discount chains and "own label" products in established supermarkets has affected every link of the chain, from growers to packers. "Retailers are cutting their fat and have put tremendous pressure on the food processing industry," Mr Braga explained.

At the Netherlands' largest supermarket chain, Albert Heijn, the trend was towards concluding partnerships directly with growers of fruits

and vegetables, said Mr Krijn Dorsman, executive vice-president of merchandising. "There are too many links in the chain between supplier and consumer," he said, noting that every link pushes up the retail price of food.

The Dutch supermarket group has therefore moved towards a policy of working with one exclusive partner for every product or product group in the fruit and vegetable sector. This partner undertakes to provide sufficient supplies to cover the supermarket chains' needs.

Mr Fred Hofman, a board member of the Bremen-based Atlantic Group, one of Germany's biggest fruit importers, told the conference he believed that importers and brokers would continue to have a role to play.

He added, however, that they would need to concentrate more on providing services, such as quality control and the arranging of "environmentally friendly" transport and packaging.

MARKET REPORT

Coffee and cocoa make further gains

London Commodity Exchange COFFEES futures maintained Monday's enthusiasm early on, the May position peaking at \$1,325 a tonne. The rally

quickly ran out of steam as a sluggish New York market helped to take the wind out of London's sails but the May price held on to \$10 of its rise

to close at \$1,316. COCOA's rally also continued, with nearby prices touching three month highs late in the day.

Compiled from Reuters

COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE

(Prices from Antwerp Metal Trading)

ALUMINIUM, 99.7 PURITY (\$ per tonne)

Close 1272.5-3.5 1301-2

Previous 1272.5-3.5 1296-7

High/Low 1263 1304/1292

AM Official 1263-5 1294-5

Kerb close 1263-5 1294-5

Open int 270,801

Total daily turnover 53,533

ALUMINIUM ALLOY (\$ per tonne)

Close 1220-30 1235-40

Previous 1212-30 1227-30

High/Low 1200 1230

AM Official 1210-3 1225-30

Kerb close 1210-3 1225-30

Open int 4,549

Total daily turnover 655

LEAD (\$ per tonne)

Close 453-4 467-8

Previous 448-50 463-54

High/Low 433.5 467-48

AM Official 448-5 463-5

Kerb close 448-5 463-5

Open int 36,529

Total daily turnover 5,262

NICKEL (\$ per tonne)

Close 5530-5 5590-600

Previous 5490-55 5590-70

High/Low 5410-500 5590-530

AM Official 5405-10 5484-5

Kerb close 5405-10 5484-5

Open int 60,827

Total daily turnover 12,319

TIN (\$ per tonne)

Close 5420-40 5485-9

Previous 5425-35 5475-90

High/Low 5400-5 5490-518

AM Official 5380-5 5430-5

Kerb close 5380-5 5430-5

Open int 19,533

Total daily turnover 5,442

ZINC, special high grade (\$ per tonne)

Close 929-30 947-8

Previous 900-5 948-50

High/Low 921-5 947-507

AM Official 921-5 948-5

Kerb close 921-5 948-5

Open int 112,092

Total daily turnover 24,664

COINTEGRATED 978 rates: 1,4807

Spot 1.4825 3 months 1.4825 6 months 1.4848 9 months 1.4832

HIGH GRADE COPPER COMEX

Close 92.30 91.10 92.30 90.55 3.745 383

Apr 92.15 91.10 92.15 90.55 3.745 383

May 92.15 91.10 92.15 90.55 3.745 383

Jun 92.15 91.10 92.15 90.55 3.745 383

Jul 92.15 91.10 92.15 90.55 3.745 383

Aug 92.15 91.10 92.15 90.55 3.745 383

Sep 92.15 91.10 92.15 90.55 3.745 383

Oct 92.15 91.10 92.15 90.55 3.745 383

Nov 92.15 91.10 92.15 90.55 3.745 383

Precious Metals continued

GOLD COMEX (100 Troy oz; \$/troy oz)

Settlement price change High Low Int Vol

Mar 386.9 +0.5 - - 62,382 18,877

Apr 387.5 +0.4 386.5 388.8

May 388.7 +0.4 387.7 389.7

Jun 389.9 +0.4 388.9 390.9

Jul 391.1 +0.4 390.1 392.1

Aug 392.3 +0.4 391.3 393.3

Sep 393.5 +0.4 392.5 394.5

Oct 394.7 +0.4 393.7 395.7

Nov 395.9 +0.4 394.9 396.9

Dec 397.1 +0.4 396.1 398.1

Jan 398.3 +0.4 397.3 399.3

Feb 399.5 +0.4 398.5 400.5

Mar 400.7 +0.4 399.7 401.7

Apr 401.9 +0.4 400.9 402.9

May 403.1 +0.4 402.1 404.1

Jun 404.3 +0.4 403.3 405.3

Jul 405.5 +0.4 404.5 406.5

Aug 406.7 +0.4 405.7 407.7

Sep 407.9 +0.4 406.9 408.9

Oct 409.1 +0.4 408.1 410.1

Nov 410.3 +0.4 409.3 411.3

Dec 411.5 +0.4 410.5 412.5

Jan 412.7 +0.4 411.7 413.7

Feb 413.9 +0.4 412.9 414.9

Mar 415.1 +0.4 414.1 416.1

Apr 416.3 +0.4 415.3 417.3

May 417.5 +0.4 416.5 418.5

Jun 418.7 +0.4 417.7 419.7

Jul 419.9 +0.4 418.9 420.9

Aug 421.1 +0.4 420.1 422.1

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Jan 455.9 +0.4 454.9 456.9

Feb 457.1 +0.4 456.1 458.1

GRA

Equity Shares Traded

Turnover by volume (million). Excluding intra-market business and overseas turnover

Month	Day	Turnover (million)
Jan	1	100
	2	100
	3	100
	4	100
	5	100
	6	100
	7	100
	8	100
	9	100
	10	100
	11	100
	12	100
	13	100
	14	100
	15	100
	16	100
	17	100
	18	100
	19	100
	20	100
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	22	100
	23	100
	24	100
	25	100
	26	100
	27	100
	28	100
	29	100
	30	100
	31	100
Feb	1	100
	2	100
	3	100
	4	100
	5	100
	6	100
	7	100
	8	100
	9	100
	10	100
	11	100
	12	100
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	15	100
	16	100
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	19	100
	20	100
	21	100
	22	100
	23	100
	24	100
	25	100
	26	100
	27	100
	28	100
Mar	1	100
	2	100
	3	100
	4	100
	5	100
	6	100
	7	100
	8	100
	9	100
	10	100
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	26	100
	27	100
	28	100
	29	100
	30	100
	31	100

+1.5 5 FT-SE SmallCap ex IT -0.

They later rallied, ending the day 5 ahead at 395p.

Reports of a further round of price cuts in the milk market hurt Unigate and Northern Foods, the shares sliding 3 to 148p and 2 to 218p respectively.

Tesco, off a penny at 223p, was said to be applying the

Other big moves

Research based pharmaceuticals group Scottie Holdings added a further 16 at 271p as investors focused on the new drugs in development.

Talk of stakeholding in Owen & Robinson, the loss making jewellery and sportswear retailer, saw the shares climb 8 to 34p.

Concern over a boardroom tussle saw Takara, the nursing

MARKET REPORTERS:
Christopher Price,
Joel Kibazo, Peter John,
Steve Thompson.

■ Other statistics, Page 21

	Rises	Falls	Same
NYSE	81	6	7
AMEX	4	10	1
OTC	0	0	0

171	112	388
42	35	118
117	79	323
28	8	10
131	83	177
128	35	296
61	40	26
835	453	1423

London Share Service.

7	Last Declarations	June 16
8	For settlement	June 27

Cavardale, Edmond Higgs, Eurotunnel Uts,
L. Puts: Eurotunnel Uts. Puts & Calls: Cannon

	Close price p	±%	Net div.	Div. cov.	Gm yld	P/E net
Dawn C	246		-	-	-	-
ports	172		RM4.03	2.2	2.8	18.7
K Wite	120	+1 -2				

ance	146	-1					
computing	148						23.6
Tiger	48 ^{1/2}						
on Values	93						
nts	52						
	145						
Japan C	103 ^{1/2}			Q23.c	2.3	2.6	18.8
line	231 ^{1/4}	\pm_2				0.6	
ough Hth	169			WN3.c	2.6	2.4	18.5
Group	214	± 8		LN4.B	2.3	2.7	20.4
on Op(ri)	73	± 6					

nts	294	-	-	-	-
N Tot	102	1.2	-	-	-
nts	81	-	-	-	-
Euro Prov	464	-4	-	-	-
N Tot	51	-	-	-	-
nts	28	-	-	-	-
Int C	199	-	-	-	-
Teach	118	-	R3.0	2.4	3.3
Value	95	-	-	-	14.6
nts	38	-	-	-	-
UK Growth	503	-6	-	-	-

	208	RS.6	2.2	3.4	17.1
	129	RS3.8	2.1	3.7	15.3
miners	159	-	-	-	-

Service	p	h
Burford	10pm	1-2
Cap. & Regional	18pm	1-2
Care UK	4pm	1-2
Conrad Rathol	4pm	
Creston Land	2pm	1-2
Firth (SM)	11pm	1-2
Grosvenor Ints	3pm	
Wetherspoon JD	5pm	

	Mar 10	Mar 9	Yr ago	High	Low
7	2547.2	2559.0	2273.3	2713.6	2124.7
6	3.03	3.02	4.32	4.52	3.43
7	4.82	4.81	6.07	6.38	3.82
6	22.39	22.43	20.53	33.43	18.40

	13.00	14.00	15.00	16.00	High	Low
2589.8	2589.8	2584.6	2589.2	2572.0	2546.2	
14	Mar 11	Mar 10	Mar 9	Yr ago		

17.3	41,061	24,193	31,769	32,183
1.0	1872.8	2118.1	1650.7	1301.2
06	45,620	38,825	35,793	37,334
7.8	713.8	780.3	806.4	508.1

WATKINS.

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● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (071) 873 4378 for more details.

T.F. Funds Managers Limited (12/20/91)									
Fund Name	Assets	Units	Price	YTD %	12 M %	3 Yr Avg %	5 Yr Avg %	10 Yr Avg %	Rating
Templeton Unit Trust Managers Ltd (12/20/91)									
Templeton Growth Fund	£1,200.00	100.00	12.00	+12.5	+15.2	+18.1	+19.8	+21.5	A
Templeton Income Fund	£800.00	80.00	8.00	+8.2	+9.5	+10.8	+11.5	+12.2	B
Templeton Bond Fund	£600.00	60.00	6.00	+6.1	+7.3	+8.5	+9.2	+9.8	C
Templeton Equity Fund	£400.00	40.00	4.00	+4.3	+5.1	+6.2	+6.8	+7.5	D
Templeton Money Fund	£200.00	20.00	2.00	+2.1	+2.5	+2.8	+3.1	+3.4	E
Templeton Short-Term Fund	£100.00	10.00	1.00	+1.2	+1.5	+1.8	+2.1	+2.4	F
Templeton Long-Term Fund	£300.00	30.00	3.00	+3.4	+4.2	+5.1	+5.8	+6.5	G
Templeton International Fund	£500.00	50.00	5.00	+5.6	+6.8	+7.9	+8.6	+9.3	H
Templeton Global Fund	£700.00	70.00	7.00	+7.8	+9.1	+10.2	+11.0	+11.8	I
Templeton Real Estate Fund	£900.00	90.00	9.00	+9.0	+10.5	+11.8	+12.5	+13.2	J
Templeton Commodity Fund	£1,100.00	110.00	11.00	+11.2	+12.8	+14.1	+14.8	+15.5	K
Templeton Hedge Fund	£1,300.00	130.00	13.00	+13.4	+15.1	+16.4	+17.1	+17.8	L
Templeton Private Equity Fund	£1,500.00	150.00	15.00	+15.6	+17.3	+18.6	+19.3	+20.0	M
Templeton Venture Capital Fund	£1,700.00	170.00	17.00	+17.8	+19.5	+20.8	+21.5	+22.2	N
Templeton Art Collection Fund	£1,900.00	190.00	19.00	+19.0	+20.7	+22.0	+22.7	+23.4	O
Templeton Fine Art Fund	£2,100.00	210.00	21.00	+21.2	+22.9	+24.2	+24.9	+25.6	P
Templeton Rare Books Fund	£2,300.00	230.00	23.00	+23.4	+25.1	+26.4	+27.1	+27.8	Q
Templeton Manuscripts Fund	£2,500.00	250.00	25.00	+25.6	+27.3	+28.6	+29.3	+30.0	R
Templeton Jewellery Fund	£2,700.00	270.00	27.00	+27.8	+29.5	+30.8	+31.5	+32.2	S
Templeton Wine Collection Fund	£2,900.00	290.00	29.00	+29.0	+30.7	+32.0	+32.7	+33.4	T
Templeton Rare Coins Fund	£3,100.00	310.00	31.00	+31.2	+32.9	+34.2	+34.9	+35.6	U
Templeton Antiques Fund	£3,300.00	330.00	33.00	+33.4	+35.1	+36.4	+37.1	+37.8	V
Templeton Collectibles Fund	£3,500.00	350.00	35.00	+35.6	+37.3	+38.6	+39.3	+40.0	W
Templeton Rare Stamps Fund	£3,700.00	370.00	37.00	+37.8	+39.5	+40.8	+41.5	+42.2	X
Templeton Rare Postcards Fund	£3,900.00	390.00	39.00	+39.0	+40.7	+42.0	+42.7	+43.4	Y
Templeton Rare Photographs Fund	£4,100.00	410.00	41.00	+41.2	+42.9	+44.2	+44.9	+45.6	Z
Templeton Rare Maps Fund	£4,300.00	430.00	43.00	+43.4	+45.1	+46.4	+47.1	+47.8	AA
Templeton Rare Documents Fund	£4,500.00	450.00	45.00	+45.6	+47.3	+48.6	+49.3	+50.0	AB
Templeton Rare Manuscripts Fund	£4,700.00	470.00	47.00	+47.8	+49.5	+50.8	+51.5	+52.2	AC
Templeton Rare Books Fund	£4,900.00	490.00	49.00	+49.0	+50.7	+52.0	+52.7	+53.4	AD
Templeton Rare Manuscripts Fund	£5,100.00	510.00	51.00	+51.2	+52.9	+54.2	+54.9	+55.6	AE
Templeton Rare Books Fund	£5,300.00	530.00	53.00	+53.4	+55.1	+56.4	+57.1	+57.8	AF
Templeton Rare Manuscripts Fund	£5,500.00	550.00	55.00	+55.6	+57.3	+58.6	+59.3	+60.0	AG
Templeton Rare Books Fund	£5,700.00	570.00	57.00	+57.8	+59.5	+60.8	+61.5	+62.2	AH
Templeton Rare Manuscripts Fund	£5,900.00	590.00	59.00	+59.0	+60.7	+62.0	+62.7	+63.4	AI
Templeton Rare Books Fund	£6,100.00	610.00	61.00	+61.2	+62.9	+64.2	+64.9	+65.6	AJ
Templeton Rare Manuscripts Fund	£6,300.00	630.00	63.00	+63.4	+65.1	+66.4	+67.1	+67.8	AK
Templeton Rare Books Fund	£6,500.00	650.00	65.00	+65.6	+67.3	+68.6	+69.3	+70.0	AL
Templeton Rare Manuscripts Fund	£6,700.00	670.00	67.00	+67.8	+69.5	+70.8	+71.5	+72.2	AM
Templeton Rare Books Fund	£6,900.00	690.00	69.00	+69.0	+70.7	+72.0	+72.7	+73.4	AN
Templeton Rare Manuscripts Fund	£7,100.00	710.00	71.00	+71.2	+72.9	+74.2	+74.9	+75.6	AO
Templeton Rare Books Fund	£7,300.00	730.00	73.00	+73.4	+75.1	+76.4	+77.1	+77.8	AP
Templeton Rare Manuscripts Fund	£7,500.00	750.00	75.00	+75.6	+77.3	+78.6	+79.3	+80.0	AQ
Templeton Rare Books Fund	£7,700.00	770.00	77.00	+77.8	+79.5	+80.8	+81.5	+82.2	AR
Templeton Rare Manuscripts Fund	£7,900.00	790.00	79.00	+79.0	+80.7	+82.0	+82.7	+83.4	AS
Templeton Rare Books Fund	£8,100.00	810.00	81.00	+81.2	+82.9	+84.2	+84.9	+85.6	AT
Templeton Rare Manuscripts Fund	£8,300.00	830.00	83.00	+83.4	+85.1	+86.4	+87.1	+87.8	AU
Templeton Rare Books Fund	£8,500.00	850.00	85.00	+85.6	+87.3	+88.6	+89.3	+90.0	AV
Templeton Rare Manuscripts Fund	£8,700.00	870.00	87.00	+87.8	+89.5	+90.8	+91.5	+92.2	AW
Templeton Rare Books Fund	£8,900.00	890.00	89.00	+89.0	+90.7	+92.0	+92.7	+93.4	AX
Templeton Rare Manuscripts Fund	£9,100.00	910.00	91.00	+91.2	+92.9	+94.2	+94.9	+95.6	AY
Templeton Rare Books Fund	£9,300.00	930.00	93.00	+93.4	+95.1	+96.4	+97.1	+97.8	AZ
Templeton Rare Manuscripts Fund	£9,500.00	950.00	95.00	+95.6	+97.3	+98.6	+99.3	+100.0	BA
Templeton Rare Books Fund	£9,700.00	970.00	97.00	+97.8	+99.5	+100.8	+101.5	+102.2	BB
Templeton Rare Manuscripts Fund	£9,900.00	990.00	99.00	+99.0	+100.7	+102.0	+102.7	+103.4	BC
Templeton Rare Books Fund	£10,100.00	1,010.00	101.00	+101.2	+102.9	+104.2	+104.9	+105.6	BD
Templeton Rare Manuscripts Fund	£10,300.00	1,030.00	103.00	+103.4	+105.1	+106.4	+107.1	+107.8	BE
Templeton Rare Books Fund	£10,500.00	1,050.00	105.00	+105.6	+107.3	+108.6	+109.3	+110.0	BF
Templeton Rare Manuscripts Fund	£10,700.00	1,070.00	107.00	+107.8	+109.5	+110.8	+111.5	+112.2	BG
Templeton Rare Books Fund	£10,900.00	1,090.00	109.00	+109.0	+110.7	+112.0	+112.7	+113.4	BH
Templeton Rare Manuscripts Fund	£11,100.00	1,110.00	111.00	+111.2	+112.9	+114.2	+114.9	+115.6	BI
Templeton Rare Books Fund	£11,300.00	1,130.00	113.00	+113.4	+115.1	+116.4	+117.1	+117.8	BJ
Templeton Rare Manuscripts Fund	£11,500.00	1,150.00	115.00	+115.6	+117.3	+118.6	+119.3	+120.0	BK
Templeton Rare Books Fund	£11,700.00	1,170.00	117.00	+117.8	+119.5	+120.8	+121.5	+122.2	BL
Templeton Rare Manuscripts Fund	£11,900.00	1,190.00	119.00	+119.0	+120.7	+122.0	+122.7	+123.4	BM
Templeton Rare Books Fund	£12,100.00	1,210.00	121.00	+121.2	+122.9	+124.2	+124.9	+125.6	BN
Templeton Rare Manuscripts Fund	£12,300.00	1,230.00	123.00	+123.4	+125.1	+126.4	+127.1	+127.8	BO
Templeton Rare Books Fund	£12,500.00	1,250.00	125.00	+125.6	+127.3	+128.6	+129.3	+130.0	BP
Templeton Rare Manuscripts Fund	£12,700.00	1,270.00	127.00	+127.8	+129.5	+130.8	+131.5	+132.2	BQ
Templeton Rare Books Fund	£12,900.00	1,290.00	129.00	+129.0	+130.7	+132.0	+132.7	+133.4	BR
Templeton Rare Manuscripts Fund	£13,100.00	1,310.00	131.00	+131.2	+132.9	+134.2	+134.9	+135.6	BS
Templeton Rare Books Fund	£13,300.00	1,330.00	133.00	+133.4	+135.1	+136.4	+137.1	+137.8	BT
Templeton Rare Manuscripts Fund	£13,500.00	1,350.00	135.00	+135.6	+137.3	+138.6	+139.3	+140.0	BU
Templeton Rare Books Fund	£13,700.00	1,370.00	137.00	+137.8	+139.5	+140.8	+141.5	+142.2	BV
Templeton Rare Manuscripts Fund	£13,900.00	1,390.00	139.00	+139.0	+140.7	+142.0	+142.7	+143.4	BW
Templeton Rare Books Fund	£14,100.00	1,410.00	141.00	+141.2	+142.9	+144.2	+144.9	+145.6	BX
Templeton Rare Manuscripts Fund	£14,300.00	1,430.00	143.00	+143.4	+145.1	+146.4	+147.1	+147.8	BY
Templeton Rare Books Fund	£14,500.00	1,450.00	145.00	+145.6	+147.3	+148.6	+149.3	+150.0	BZ
Templeton Rare Manuscripts Fund	£14,700.00	1,470.00	147.00	+147.8	+149.5	+150.8	+151.5	+152.2	CA
Templeton Rare Books Fund	£14,900.00	1,490.00	149.00	+149.0	+150.7	+152.0	+152.7	+153.4	CB
Templeton Rare Manuscripts Fund	£15,100.00	1,510.00	151.00	+151.2	+152.9	+154.2	+154.9	+155.6	CC
Templeton Rare Books Fund	£15,300.00	1,530.00	153.00	+153.4	+155.1	+156.4	+157.1	+157.8	CD
Templeton Rare Manuscripts Fund	£15,500.00	1,550.00	155.00	+155.6	+157.3	+158.6	+159.3	+160.0	CE
Templeton Rare Books Fund	£15,700.00	1,570.00	157.00	+157.8	+159.5	+160.8	+161.5	+162.2	CF
Templeton Rare Manuscripts Fund	£15,900.00	1,590.00	159.00	+159.0	+160.7	+162.0	+162.7	+163.4	CG
Templeton Rare Books Fund	£16,100.00	1,610.00	161.00	+161.2	+162.9	+164.2	+164.9	+165.6	CH
Templeton Rare Manuscripts Fund	£16,300.00	1,630.00	163.00	+163.4	+165.1	+166.4	+167.1	+167.8	CI
Templeton Rare Books Fund	£16,500.00	1,650.00	165.00	+165.6	+167.3	+168.6	+169.3	+170.0	CJ
Templeton Rare Manuscripts Fund	£16,700.00	1,670.00	167.00	+167.8	+169.5	+170.8	+171.5	+172.2	CK
Templeton Rare Books Fund	£16,900.00	1,690.00	169.00	+169.0	+170.7	+172.0	+172.7	+173.4	CL
Templeton Rare Manuscripts Fund	£17,100.00	1,710.00	171.00	+171.2	+172.9	+174.2	+174.9	+175.6	CM
Templeton Rare Books Fund	£17,300.00	1,730.00	173.00	+173.4	+175.1	+176.4	+177.1	+177.8	CN
Templeton Rare Manuscripts Fund	£17,500.00	1,750.00	175.00	+175.6	+177.3	+178.6	+179.3	+180.0	CO
Templeton Rare Books Fund	£17,700.00	1,770.00	177.00	+177.8	+179.5	+180.8	+181.5	+182.2	CP
Templeton Rare Manuscripts Fund	£17,900.00	1,790.00	179.00	+179.0	+180.7	+182.0	+182.7	+183.4	CQ
Templeton Rare Books Fund	£18,100.00	1,810.00	181.00	+181.2	+182.9	+184.2	+184.9	+185.6	CR
Templeton Rare Manuscripts Fund	£18,300.00	1,830.00	183.00	+183.4	+185.1	+186.4	+187.1	+187.8	CS
Templeton Rare Books Fund	£18,500.00	1,850.00	185.00	+185.6	+187.3	+188.6	+189.3	+190.0	CT
Templeton Rare Manuscripts Fund	£18,700.00	1,870.00	187.00	+187.8	+189.5	+190.8	+191.5	+192.2	CU
Templeton Rare Books Fund	£18,900.00	1,890.00	189.00	+189.0	+190.7	+192.0	+192.7	+193.4	CV
Templeton Rare Manuscripts Fund	£19,100.00	1,910.00	191.00	+191.2	+192.9	+194.2	+194.9	+195.6	CW
Templeton Rare Books Fund	£19,300.00	1,930.00	193.00	+193.4	+195.1	+196.4	+197.1	+197.8	CX
Templeton Rare Manuscripts Fund	£19,500.00	1,950.00	195.00	+195.6	+197.3	+198.6	+199.3	+200.0	CY
Templeton Rare Books Fund	£19,700.00	1,970.00	197.00	+197.8	+199.5	+200.8	+201.5	+202.2	CZ
Templeton Rare Manuscripts Fund	£19,900.00	1,990.00	199.00	+199.0	+200.7	+202.0	+202.7	+203.4	DA
Templeton Rare Books Fund	£20,100.00	2,010.00	201.00	+201.2	+202.9	+204.2	+204.9	+205.6	DB
Templeton Rare Manuscripts Fund	£20,300.00	2,030.00	203.00	+203.4	+205.1	+206.4	+207.1	+207.8	DC
Templeton Rare Books Fund	£20,500.00	2,050.00	205.00	+205.6	+207.3	+208.6	+209.3	+210.0	DD
Templeton Rare Manuscripts Fund	£20,700.00	2,070.00	207.00	+207.8	+209.5	+210.8	+211.5	+212.2	DE
Templeton Rare Books Fund	£20,900.00	2,090.00	209.00	+209.0	+210.7	+212.0	+212.7	+213.4	DF
Templeton Rare Manuscripts Fund	£21,100.00	2,110.00	211.00	+211.2	+212.9	+214.2	+214.9	+215.6	DG
Templeton Rare Books Fund	£21,300.00	2,130.00	213.00	+213.4	+215.1	+216.4	+217.1	+217.8	DH
Templeton Rare Manuscripts Fund	£21,500.00	2,150.00	215.00						

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (071) 873 4378 for more details.

OFFSHORE AND OVERSEAS

BERMUDA (SIB RECOGNISED)

BERMUDA (SIB RECOGNISED)

[illegible]

Est. Charge	Cash Price	Net Price	Other Price	+ or -	Value Rec'd
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[illegible]

ESMAA For Bldg	4	2002	27.71	1.11	1.11
ESMAA Const. Exp	4	40,216	14.438	-4.122	0.5
ESMAA E. Money	4	18,083	10.517	-3.003	6.5
ESMAA E. Money	4	15,015	15.815	-3.002	2.5

[illegible][illegible][illegible][illegible][illegible][illegible]

3

[illegible]

IRELAND —

[illegible]

GT ASIAN A	25	25	25
GT ASIAN B	25	25	25
GT ASIAN C	25	25	25
GT ASIAN D	25	25	25

[illegible][illegible]

Japan Ship Co.	1-27-84	1-27-84
Latin America F.	1-27-84	1-27-84
Oceanic Agency	1-27-84	1-27-84
Oceanic Agency	1-27-84	1-27-84

[illegible]

IRELAND (REGULATED)			
2004	Other	+ or -	T
100	100	0	100

[illegible]

Morgan Grenfell Profunds Plc			
Active Investment	£2,470B	-0.9142	0
Index	£1,421B	-0.1021	0

[illegible]

ADN Managed	5	81.7067	0.7067	0.2134	0.0000
ADN 9000 Currency	5	99.304	0.304	0.3773	0.0000
ADN 9000	5	99.304	0.304	0.3773	0.0000

[illegible][illegible]

1994	210.78	221.81	+5.20
1995	169.37	177.14	+4.59
1996	108.87	112.08	+2.96

1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585
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Barclays International Funds
Fid. Inv. Co., 100 N. Wall, Jersey City
Fidelity Funds[illegible]

Per East Equity	52 1/2	\$21.82	21.82	22.18	-0.11
US Smaller Cos	52 1/2	\$21.40	21.40	21.82	-0.05
European Equity	49 1/2	\$20.11	19.17	19.39	+0.15

[illegible]

South East Asia	\$27.108	38.051	---
US Dollar Liquidity	\$8.536	19.013	+0.001
Cable Atlas Investment Management (C)			

CA Data Systems	\$2.25	\$2.00	100%
CAI Systems	\$2.25	\$2.00	100%
CHS (Coca-Cola)			
Street View Investment Funds			
American	\$4.00	\$4.00	100%
British	\$4.00	\$4.00	100%
Euro	\$4.00	\$4.00	100%
Global	\$4.00	\$4.00	100%
Japan	\$4.00	\$4.00	100%
Latin	\$4.00	\$4.00	100%
Middle East	\$4.00	\$4.00	100%
Pacific	\$4.00	\$4.00	100%
Russia	\$4.00	\$4.00	100%
South America	\$4.00	\$4.00	100%
U.S.	\$4.00	\$4.00	100%
Europe	\$4.00	\$4.00	100%
Asia	\$4.00	\$4.00	100%
Africa	\$4.00	\$4.00	100%
Australia	\$4.00	\$4.00	100%
Canada	\$4.00	\$4.00	100%
France	\$4.00	\$4.00	100%
Germany	\$4.00	\$4.00	100%
Italy	\$4.00	\$4.00	100%
Japan	\$4.00	\$4.00	100%
Korea	\$4.00	\$4.00	100%
Latin	\$4.00	\$4.00	100%
Middle East	\$4.00	\$4.00	100%
Pacific	\$4.00	\$4.00	100%
Russia	\$4.00	\$4.00	100%
South America	\$4.00	\$4.00	100%
U.S.	\$4.00	\$4.00	100%
Europe	\$4.00	\$4.00	100%
Asia	\$4.00	\$4.00	100%
Africa	\$4.00	\$4.00	100%
Australia	\$4.00	\$4.00	100%
Canada	\$4.00	\$4.00	100%
France	\$4.00	\$4.00	100%
Germany	\$4.00	\$4.00	100%
Italy	\$4.00	\$4.00	100%
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Latin	\$4.00	\$4.00	100%
Middle East	\$4.00	\$4.00	100%
Pacific	\$4.00	\$4.00	100%
Russia	\$4.00	\$4.00	100%
South America	\$4.00	\$4.00	100%
U.S.	\$4.00	\$4.00	100%
Europe	\$4.00	\$4.00	100%
Asia	\$4.00	\$4.00	100%
Africa	\$4.00	\$4.00	100%
Australia	\$4.00	\$4.00	100%
Canada	\$4.00	\$4.00	100%
France	\$4.00	\$4.00	100%
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Italy	\$4.00	\$4.00	100%
Japan	\$4.00	\$4.00	100%
Korea	\$4.00	\$4.00	100%
Latin	\$4.00	\$4.00	100%
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Pacific	\$4.00	\$4.00	100%
Russia	\$4.00	\$4.00	100%
South America	\$4.00	\$4.00	100%
U.S.	\$4.00	\$4.00	100%
Europe	\$4.00	\$4.00	100%
Asia	\$4.00	\$4.00	100%
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Middle East	\$4.00	\$4.00	100%
Pacific	\$4.00	\$4.00	100%
Russia	\$4.00	\$4.00	100%
South America	\$4.00	\$4.00	100%
U.S.	\$4.00	\$4.00	100%
Europe	\$4.00	\$4.00	100%
Asia	\$4.00	\$4.00	100%
Africa	\$4.00	\$4.00	100%
Australia	\$4.00	\$4.00	100%
Canada	\$4.00	\$4.00	100%
France	\$4.00	\$4.00	100%
Germany	\$4.00	\$4.00	100%
Italy	\$4.00	\$4.00	100%
Japan	\$4.00	\$4.00	100%
Korea	\$4.00	\$4.00	100%
Latin	\$4.00	\$4.00	100%
Middle East	\$4.00	\$4.00	100%

Credit Suisse

[illegible]

1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Discussion**
 6. **Conclusion**
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Microsoft Corp.	40 1/2	40 1/2
Oracle Corp.	27 1/2	27 1/2
Novell Inc.	24 1/2	24 1/2
3M Co.	23 1/2	23 1/2
AT&T Special Div.	22 1/2	22 1/2
Unisys Corp.	21 1/2	21 1/2
Compaq Computer	20 1/2	20 1/2
Ch. Technology	19 1/2	19 1/2
IBM Business	18 1/2	18 1/2
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CURRENCIES AND MONEY

MARKETS REPORT

\$ steady on mixed data

Economic data released in the US yesterday revealed hints of inflation, but had little impact on the dollar which has already factored in a further Fed tightening, writes Philip Gouth.

The US currency failed to make a sustained break through the key technical level of DM1.6975 and finished in London at DM1.6963, up from DM1.6898 on Monday.

Boosted by a fall in Japan's bilateral trade surplus with the US in February, the dollar also finished stronger against the yen, closing at Y106.150 from Y105.880.

In Europe the recovery from recent interest rate pessimism continued with both sterling and euro-mark futures rising across the yield curve. Market speculation is that the Bundesbank will today announce a more generous cut in its repo rate than the 3 basis points of the last two weeks.

The dollar weakened initially after the release of fairly modest inflation data which appeared to postpone the need for higher US interest rates.

Although the headline figure showed February producer prices up by 0.5 per cent, this figure fell to 0.1 per cent when the volatile food and energy sectors were excluded. Cold weather in February pushed fuel bills to exceptional levels.

The industrial production numbers released a little later, however, led support to the US currency. February industrial production rose 0.4 per cent, against expectations of no change, while capacity use was 83.4 per cent against a 83 per cent forecast.

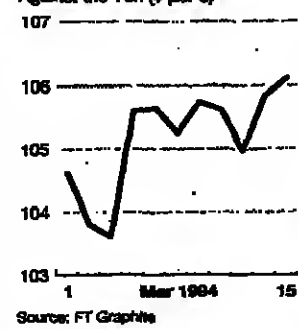
Mr David Cocker, currency analyst at Chemical Bank, said the capacity utilisation measure had caused concern. "We are almost at the level at which in the past we have seen inflation pressure build in the US."

Mr Neil MacKinnon, chief currency strategist at Citibank, endorsed this view, saying "inflation pressures are bubbling below the surface." He said there was nothing in the data to prevent the Fed from tightening if it wishes.

Mr Cocker said the muted response of the dollar was

Dollar

Against the Yen (¥ per \$)



Source: FT Graphite

£ Pound in New York

Mar 15	Close	Open	High	Low
2 spot	1.6915	1.6915	1.6915	1.6915
1 month	1.6915	1.6915	1.6915	1.6915
3 month	1.6915	1.6915	1.6915	1.6915
1 yr	1.6915	1.6915	1.6915	1.6915

explained by the market already having factored in a rise in US interest rates.

Mr MacKinnon said the figures contained nothing new for dollar bulls. He predicted the US currency "will find it very difficult to make progress against the D-Mark from now on."

Japan's February trade figures offered some solace for dollar bulls, showing an unadjusted 0.9 per cent decline in the February surplus with the US from a year earlier.

This positive note was promptly offset by comments from Mr Mickey Kantor, the US trade representative, showing that the US would continue to play tough over the trade talks.

"Our trade and economic relationship, a key priority of the Clinton administration, is in serious disrepair," he said.

The D-Mark was mixed in European trading ahead of today's repo announcement. It was unchanged in London against the Belgian and French francs, at Bfr20.60 and Ffr3.98 respectively, but was weaker against the Italian lira, at L986.4 from L986.1, and stronger against the Spanish peseta, finishing at Ptas62.02 from Ptas61.94.

Increased optimism about the pace of monetary easing was evident in the euro-mark futures. The June contract firmed by 4 points to 94.60 and the December contract was 10

points firmer at 95.06.

Analysts said German call money, in the 5.50-5.90 range was also helping, in that it indicated the market could accept a 6-7 basis points cut without difficulty.

Call money is now below the repo rate, which is 5.94 per cent. The Bundesbank yesterday announced that it would be implementing another variable rate repo.

Some observers were more aggressive in their forecasts with Citibank's Mr MacKinnon saying he "would not be surprised" if the repo fell to 5.75 per cent. "The strength of the D-Mark gives the Bundesbank a chance to put through quite a handsome repo cut."

One factor likely to have a bearing on the size of the cut is the reportedly easy liquidity position of the banks, which may have encouraged lower bids.

Sterling showed little reaction to the CBI's distributive trades survey which showed a slow-down in retail sales growth. It finished slightly weaker against the dollar at \$1.4915 from \$1.4945, but was firmer against the D-Mark closing at DM2.53 from DM2.524.

The CBI survey did have an impact in the futures market with the June sterling contract rising by six points to 94.90, and the December contract eight points higher at 94.60.

In the discount market the overnight rate maintained its firm tone of late, trading around 6 per cent. Mr Philip Shaw, group economist at Union Discount, said the Bank of England was continuing to have difficulty in clearing the shortage. He said this reflected a shortage of bills rather than pressure from the Bank.

Yesterday the Bank provided the market with \$550m late assistance after earlier putting \$550m liquidity into the system. This compared with a revised forecast of a \$125bn shortage.

IN OTHER CURRENCIES

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POUND SPOT FORWARD AGAINST THE DOLLAR

Mar 15	Closing mid-point	Change on open	50/100 spread	Day's High	Mid Low	One month Rate	%PA	Three months Rate	%PA	One year Rate	%PA	Bank of Eng. Ind.
Europe												
Austria	(Sch)	17.7973	+0.0298	878	-070	17.8391	17.0893	17.7935	0.3	17.7678	0.2	118.1
Belgium	(Bfr)	62.1149	+0.1014	657	-030	62.2151	62.0291	62.163	-1.2	62.258	-1.1	58.509
Denmark	(DKr)	16.875	+0.0001	671	-001	16.875	16.875	16.875	-1.1	16.8992	-1.0	9.39
Finland	(Fmk)	8.2620	+0.0048	816	-722	8.2890	8.1891	8.262	0.7	8.262	0.6	81.4
France	(Ffr)	0.5364	+0.0185	347	-011	0.5176	0.5795	0.5079	-1.3	0.5326	-1.2	3.8476
Germany	(DM)	2.8300	+0.0046	287	-312	2.8381	2.8586	2.832	-0.3	2.8335	-0.2	120.8
Greece	(Dr)	9.9877	+0.0001	998	-001	9.9877	9.9877	9.9877	0.0	9.9877	0.0	9.9877
Ireland	(Ir)	0.0399	+0.0001	398	-410	0.0429	0.0391	0.0407	-1.0	0.0424	-1.0	1.0482
Italy	(L)	2483.27	+1.403	131	-622	2496.99	2480.44	2483.27	-3.5	2513.82	-3.3	2398.57
Luxembourg	(Lfr)	92.1130	+0.1014	897	-030	92.2151	92.0291	92.163	-1.2	92.258	-1.1	89.509
Netherlands	(Gld)	16.875	+0.0001	671	-001	16.875	16.875	16.875	-1.1	16.8992	-1.0	9.39
Norway	(Nkr)	10.9489	+0.0225	447	-550	11.0106	10.8308	10.9489	-0.8	10.9596	-0.7	10.9479
Portugal	(Esc)	266.880	+0.748	681	-891	280.441	238.917	266.88	-4.5	282.74	-4.5	85.0
Spain	(Ptas)	207.3259	+0.0181	814	-842	207.3985	207.3259	207.3259	-0.5	207.3259	-0.5	207.3259
Sweden	(Skr)	7.2648	+0.0185	726	-481	7.2935	7.0771	7.2648	-2.0	7.2648	-1.9	7.2648
Switzerland	(Sfr)	1.5000	+0.0081	488	-915	1.5137	1.4372	1.4162	-1.0	1.4146	-1.0	1.4162
UK	(Sterling)	1.3000	+0.0022	898	-102	1.3116	1.2676	1.2911	-1.5	1.3153	-1.1	1.3168
USA	(Dollar)	0.97732	+0.0022	989	-102	0.9892	0.9773	0.9773	-1.5	0.9892	-1.1	0.9892
Americas												
Argentina	(Peso)	1128.74	-0.0033	932	-814	1.4361	1.4686	1.4361	0.0	1.4361	0.0	1.4361
Brazil	(Cruzado)	1128.74	-0.0033	932	-814	1.4361	1.4686	1.4361	0.0	1.4361	0.0	1.4361
Canada	(Cdn)	0.2038	+0.0013	327	-348	0.2056	0.2024	0.2031	1.8	0.2029	1.0	68.0
Mexico	(New Peso)	0.4951	+0.0787	501	-920	0.4984	0.4981	0.4981	0.0	0.4981	0.0	0.4981
USA	(Dollar)	0.97732	+0.0022	989	-102	0.9892	0.9773	0.9773	-1.5	0.9892	-1.1	0.9892
Pacific/Middle East/Africa												
Australia	(A\$)	2.0727	+0.008	714	-749	2.0815	2.0594	2.0712	0.9	2.0899	0.7	2.0899
Hong Kong	(H\$)	11.9223	+0.0245	117	-269	12.0818	11.9032	11.923	1.4	11.9039	0.8	11.9458
Japan	(Y)	158.323	+0.0065	159	-400	159.5110	158.190	157.838	3.0	157.228	2.6	158.323
Malaysia	(RM)	0.0500	+0.0007	749	-851	0.0504	0.0505	0.0504	0.0	0.0504	0.0	0.0504
New Zealand	(NZ\$)	2.5874	+0.0075	850	-888	2.6000	2.5870	2.5868	-1.3	2.5944	-1.1	2.5936
Philippines	(P\$)	61.1292	+0.045	612	-954	61.4320	61.1292	61.1292	0.0	61.1292	0.0	61.1292
Saudi Arabia	(SR)	2.5874	+0.0075	851	-858	2.6000	2.5870	2.5868	-1.3	2.5944	-1.1	2.5936
Singapore	(S\$)	2.5874	+0.0075	850	-888	2.6000	2.5870	2.5868	-1.3	2.5944	-1.1	2.5936
S Africa (Cm)	(R)	0.5481	+0.0097	548	-955	0.5481	0.5481	0.5481	0.0	0.5481	0.0	0.5481
S Africa (Cm)	(R)	0.5481	+0.0097	548	-955	0.5481	0.5481	0.5481	0.0	0.5481	0.0	0.5481
South Korea	(Won)	1202.63	+0.279	1203	-330	1207.10	1201.44	1202.63	0.0	1202.63	0.0	1202.63
Taiwan	(T\$)	36.9756	+0.0643	844	-899	38.0090	36.9756	36.9756	0.0	36.9756	0.0	36.9756

WORLD STOCK MARKETS

EUROPE									
AUSTRIA (Mar 15 / Fri)									
ATX	2,075	+12	2,063	2,075	2,075	2,075	2,075	2,075	2,075
ATX 100	1,035	+6	1,029	1,035	1,035	1,035	1,035	1,035	1,035
ATX 200	1,040	+6	1,034	1,040	1,040	1,040	1,040	1,040	1,040
ATX 300	1,045	+6	1,039	1,045	1,045	1,045	1,045	1,045	1,045
ATX 400	1,050	+6	1,044	1,050	1,050	1,050	1,050	1,050	1,050
ATX 500	1,055	+6	1,049	1,055	1,055	1,055	1,055	1,055	1,055
ATX 600	1,060	+6	1,054	1,060	1,060	1,060	1,060	1,060	1,060
ATX 700	1,065	+6	1,059	1,065	1,065	1,065	1,065	1,065	1,065
ATX 800	1,070	+6	1,064	1,070	1,070	1,070	1,070	1,070	1,070
ATX 900	1,075	+6	1,069	1,075	1,075	1,075	1,075	1,075	1,075
ATX 1000	1,080	+6	1,074	1,080	1,080	1,080	1,080	1,080	1,080
ATX 1100	1,085	+6	1,079	1,085	1,085	1,085	1,085	1,085	1,085
ATX 1200	1,090	+6	1,084	1,090	1,090	1,090	1,090	1,090	1,090
ATX 1300	1,095	+6	1,089	1,095	1,095	1,095	1,095	1,095	1,095
ATX 1400	1,100	+6	1,094	1,100	1,100	1,100	1,100	1,100	1,100
ATX 1500	1,105	+6	1,099	1,105	1,105	1,105	1,105	1,105	1,105
ATX 1600	1,110	+6	1,104	1,110	1,110	1,110	1,110	1,110	1,110
ATX 1700	1,115	+6	1,109	1,115	1,115	1,115	1,115	1,115	1,115
ATX 1800	1,120	+6	1,114	1,120	1,120	1,120	1,120	1,120	1,120
ATX 1900	1,125	+6	1,119	1,125	1,125	1,125	1,125	1,125	1,125
ATX 2000	1,130	+6	1,124	1,130	1,130	1,130	1,130	1,130	1,130
ATX 2100	1,135	+6	1,129	1,135	1,135	1,135	1,135	1,135	1,135
ATX 2200	1,140	+6	1,134	1,140	1,140	1,140	1,140	1,140	1,140
ATX 2300	1,145	+6	1,139	1,145	1,145	1,145	1,145	1,145	1,145
ATX 2400	1,150	+6	1,144	1,150	1,150	1,150	1,150	1,150	1,150
ATX 2500	1,155	+6	1,149	1,155	1,155	1,155	1,155	1,155	1,155
ATX 2600	1,160	+6	1,154	1,160	1,160	1,160	1,160	1,160	1,160
ATX 2700	1,165	+6	1,159	1,165	1,165	1,165	1,165	1,165	1,165
ATX 2800	1,170	+6	1,164	1,170	1,170	1,170	1,170	1,170	1,170
ATX 2900	1,175	+6	1,169	1,175	1,175	1,175	1,175	1,175	1,175
ATX 3000	1,180	+6	1,174	1,180	1,180	1,180	1,180	1,180	1,180
ATX 3100	1,185	+6	1,179	1,185	1,185	1,185	1,185	1,185	1,185
ATX 3200	1,190	+6	1,184	1,190	1,190	1,190	1,190	1,190	1,190
ATX 3300	1,195	+6	1,189	1,195	1,195	1,195	1,195	1,195	1,195
ATX 3400	1,200	+6	1,194	1,200	1,200	1,200	1,200	1,200	1,200
ATX 3500	1,205	+6	1,199	1,205	1,205	1,205	1,205	1,205	1,205
ATX 3600	1,210	+6	1,204	1,210	1,210	1,210	1,210	1,210	1,210
ATX 3700	1,215	+6	1,209	1,215	1,215	1,215	1,215	1,215	1,215
ATX 3800	1,220	+6	1,214	1,220	1,220	1,220	1,220	1,220	1,220
ATX 3900	1,225	+6	1,219	1,225	1,225	1,225	1,225	1,225	1,225
ATX 4000	1,230	+6	1,224	1,230	1,230	1,230	1,230	1,230	1,230
ATX 4100	1,235	+6	1,229	1,235	1,235	1,235	1,235	1,235	1,235
ATX 4200	1,240	+6	1,234	1,240	1,240	1,240	1,240	1,240	1,240
ATX 4300	1,245	+6	1,239	1,245	1,245	1,245	1,245	1,245	1,245
ATX 4400	1,250	+6	1,244	1,250	1,250	1,250	1,250	1,250	1,250
ATX 4500	1,255	+6	1,249	1,255	1,255	1,255	1,255	1,255	1,255
ATX 4600	1,260	+6	1,254	1,260	1,260	1,260	1,260	1,260	1,260
ATX 4700	1,265	+6	1,259	1,265	1,265	1,265	1,265	1,265	1,265
ATX 4800	1,270	+6	1,264	1,270	1,270	1,270	1,270	1,270	1,270
ATX 4900	1,275	+6	1,269	1,275	1,275	1,275	1,275	1,275	1,275
ATX 5000	1,280	+6	1,274	1,280	1,280	1,280	1,280	1,280	1,280
ATX 5100	1,285	+6	1,279	1,285	1,285	1,285	1,285	1,285	1,285
ATX 5200	1,290	+6	1,284	1,290	1,290	1,290	1,290	1,290	1,290
ATX 5300	1,295	+6	1,289	1,295	1,295	1,295	1,295	1,295	1,295
ATX 5400	1,300	+6	1,294	1,300	1,300	1,300	1,300	1,300	1,300
ATX 5500	1,305	+6	1,299	1,305	1,305	1,305	1,305	1,305	1,305
ATX 5600	1,310	+6	1,304	1,310	1,310	1,310	1,310	1,310	1,310
ATX 5700	1,315	+6	1,309	1,315	1,315	1,315	1,315	1,315	1,315
ATX 5800	1,320	+6	1,314	1,320	1,320	1,320	1,320	1,320	1,320
ATX 5900	1,325	+6	1,319	1,325	1,325	1,325	1,325	1,325	1,325
ATX 6000	1,330	+6	1,324	1,330	1,330	1,330	1,330	1,330	1,330
ATX 6100	1,335	+6	1,329	1,335	1,335	1,335	1,335	1,335	1,335
ATX 6200	1,340	+6	1,334	1,340	1,340	1,340	1,340	1,340	1,340
ATX 6300	1,345	+6	1,339	1,345	1,345	1,345	1,345	1,345	1,345
ATX 6400	1,350	+6	1,344	1,350	1,350	1,350	1,350	1,350	1,350
ATX 6500	1,355	+6	1,349	1,355	1,355	1,355	1,355	1,355	1,355
ATX 6600	1,360	+6	1,354	1,360	1,360	1,360	1,360	1,360	1,360
ATX 6700	1,365	+6	1,359	1,365	1,365	1,365	1,365	1,365	1,365
ATX 6800	1,370	+6	1,364	1,370	1,370	1,370	1,370	1,370	1,370
ATX 6900	1,375	+6	1,369	1,375	1,375	1,375	1,375	1,375	1,375
ATX 7000	1,380	+6	1,374	1,380	1,380	1,380	1,380	1,380	1,380
ATX 7100	1,385	+6	1,379	1,385	1,385	1,385	1,385	1,385	1,385
ATX 7200	1,390	+6	1,384	1,390	1,390	1,390	1,390	1,390	1,390
ATX 7300	1,395	+6	1,389	1,395	1,395	1,395	1,395	1,395	1,395
ATX 7400	1,400	+6	1,394	1,400	1,400	1,400	1,400	1,400	1,400
ATX 7500	1,405	+6	1,399	1,405	1,405	1,405	1,405	1,405	1,405
ATX 7600	1,410	+6	1,404	1,410	1,410	1,410	1,410	1,410	1,410
ATX 7700	1,415	+6	1,409	1,415	1,415	1,415	1,415	1,415	1,415
ATX 7800	1,420	+6	1,414	1,420	1,420	1,420	1,420	1,420	1,420
ATX 7900	1,425	+6	1,419	1,425	1,425	1,425	1,425	1,425	1,425
ATX 8000	1,430	+6	1,424	1,430	1,430	1,430	1,430	1,430	1,430
ATX 8100	1,435	+6	1,429	1,435	1,435	1,435	1,435	1,435	1,435
ATX 8200	1,440	+6	1,434	1,440	1,440	1,440	1,440	1,440	1,440
ATX 8300	1,445	+6	1,439	1,445	1,445	1,445	1,445	1,445	1,445
ATX 8400	1,450	+6	1,444	1,450	1,450	1,450	1,450	1,450	1,450
ATX 8500	1,455	+6	1,449	1,455	1,455	1,455	1,455	1,455	1,455
ATX 8600	1,460	+6	1,454	1,460	1,460	1,460	1,460	1,460	1,460
ATX 8700	1,465	+6	1,459	1,465	1,465	1,465	1,465	1,465	1,465
ATX 8800	1,470	+6	1,464	1,470	1,470	1,470	1,470	1,470	1,470
ATX 8900	1,475	+6	1,469	1,475	1,475	1,475	1,475	1,475	1,475
ATX 9000	1,480	+6	1,474	1,480	1,480	1,480	1,480	1,480	1,480
ATX 9100	1,485	+6	1,479	1,485	1,485	1,485	1,485	1,485	1,485
ATX 9200	1,490	+6	1,484	1,490	1,490	1,490	1,490	1,490	1,490
ATX 9300	1,495	+6	1,489	1,495	1,495	1,495	1,495	1,495	1,495
ATX 9400	1,500	+6	1,494	1,500	1,500	1,500	1,500	1,500	1,500
ATX 9500	1,505	+6							

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

4 pm close March 15

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NASDAQ NATIONAL MARKET

4 pm class March 15

- X - Y - Z -

AMERICA

Economic news fails to give Dow impetus

Wall Street

US share prices slipped yesterday morning in spite of a rally in the bond market and more favourable news on the economy, writes Frank McGurty in New York.

By 1 pm, the Dow Jones Industrial Average was 2.74 lower at 3,850.24, while the more broadly based Standard & Poor's 500 was up 0.53 at 467.37. In the secondary markets, the American SE composite was off 0.21 at 467.83, but the Nasdaq composite managed to add 2.27 at 785.07.

After ignoring further weakness in the US Treasury market the previous session, stocks were unmoved by yesterday's rebound in bond prices. At best, share prices struggled into positive territory during the course of the morning, aided by some solid numbers on industrial production, coupled with a tame report on producer price inflation.

The Labor Department reported a 0.5 per cent increase in the February producer price index, but the stronger-than-expected reading was largely attributed to a big jump in energy prices, due to harsh winter weather last month.

Excluding energy and food, producer prices inched 0.1 per cent ahead, against a consensus forecast of 0.3 per cent.

The encouraging figure triggered heavy buying of the benchmark 30-year government bond, which is especially sensitive to inflationary expectations. Yields fell well below the worrisome 7.0 per cent level, giving some breathing space to equity investors troubled by a swift rise in long-term interest rates in recent weeks.

Still, enthusiasm was restrained, with most of the blue chips showing little movement during the first half of the session. By the afternoon, most indices were drifting into negative territory. The Nasdaq, buoyed by financial and transport issues, was the exception. Kemper surged 20%, or nearly 50 per cent, to \$61.4, since the close of NYSE trading the previous session. The stock took off in overnight trading on news of a \$3.2bn takeover bid for the financial services concern launched by GE Capital. The announcement came just as Monday's session was drawing to an end.

Overall, the financial sector showed the most strength. Among the Dow industrials, JP Morgan, up \$1 at \$65.1, delivered one of the best perfor-

mances. The investment bank revealed that it would back a proposed restructuring plan for Banco Espanol de Credito, the ailing Spanish bank in which it holds a 7.9 per cent stake.

Dreyfus, the mutual funds group to be acquired by Mellon Bank, picked up \$1 1/4 to \$49. Among insurance stocks, several groups benefited from a "strong buy" recommendation by Mr Steven Givens, an analyst with Kidder Peabody in New York. Chubb climbed \$1 1/4 to \$74.4. General Re was up \$1 1/4 at \$108.4. American International jumped \$2 1/4 to \$86.4 and Marsh & McLennan added \$1 to \$82.4.

Elsewhere, PepsiCo was given a lift from an upgrading by AG Edwards & Sons. The stock gained \$1 1/4 to \$37. Time Warner continued its impressive run, climbing \$1 1/4 to \$40.

Canada

Toronto continued higher at midday, fuelled by industrial, transport and banking stocks, as well as by an air of renewed economic confidence.

The TSE 300 composite index rose 16.46 to 4,486.54 at noon. Transportation issues led the market forward with a jump of 47.66, or 1.2 per cent, to 4,200.54.

EUROPE

Domestic component in bourse revival

Bourses found both domestic and international grounds for yesterday's gains, writes Our Markets Staff.

PARIS, up nearly 2 per cent, was little affected by the US PFI figures, finding other and various reasons for the rise. Including lingering hopes of a Buba rate cut tomorrow, as well as support from the futures market.

The CAC-40 index closed 43.50 higher at 2,258.52.

There was strong activity among media stocks. Canal Plus, in particular, was one of the session's most active performers, adding \$2.44 or 8 per cent to FF1,050. It was suggested that the group was helped by reports that the government was reviewing its request for a financial commitment towards the development of a cable network.

Lyonnaise des Eaux-Dumez, the construction group, up FF8.2 to FF85.2, announced that its Dumez and CTR-Europe units would form a joint venture. CTR-Europe rose 5 per cent to FF490, on the news.

Euro Disney, suspended limit down at one stage during the morning, recovered to close the day up 85 centimes at FF374.70.

FRANKFURT consolidated most of Monday afternoon's gains, the Dax index showing a session rise of 20.42, and moved

on again after hours with the this-indicated Dax closing at 2,178.91.

Brokers said that Monday afternoon's gains reflected Morgan Stanley's raising of its recommended weighting in German equities. Turnover rose again, from DM2.5bn to DM2.5bn.

Sentiment was lifted by Bayer which, unexpectedly, said that it would hold the dividend at DM11. After a DM2.50 rise on the session the chemical group rose another DM4.50 to DM380 after hours.

Relative strength continued in financials, in Siemens as it caught up with other blue chips and in Volkswagen. But the most striking Dax stock gain was in Schering, after an average response to Monday's progress report, the pharmaceutical group put on DM37, or 3.6 per cent to DM1,073.

Mr Mark Tracey of Goldman Sachs said that there were six reasons for being bullish about Schering: significant margin expansion in core pharmaceuticals; Betaseron, the new multiple sclerosis drug; cost savings potential; improvements in production techniques; strong cash flow; and benefits from AgriBio, the joint venture with Hoechst in agrochemicals.

AMSTERDAM firmed with strong interest seen in the heavily weighted issues, DSM

FT-SE Actuaries Share Indices

THE EUROPEAN SERIES									
Yearly changes	Open	10.30	11.00	12.00	13.00	14.00	15.00	Close	
FT-SE 100	1465.85	1464.37	1465.16	1464.20	1464.82	1467.83	1468.29	1469.35	
FT-SE 250	1504.87	1503.35	1504.23	1504.61	1505.00	1506.25	1506.25	1511.24	

THE EUROPEAN SERIES									
Yearly changes	Open	10.30	11.00	12.00	13.00	14.00	15.00	Close	
FT-SE 100	1465.85	1464.37	1465.16	1464.20	1464.82	1467.83	1468.29	1469.35	
FT-SE 250	1504.87	1503.35	1504.23	1504.61	1505.00	1506.25	1506.25	1511.24	

and Akzo Nobel, for example, adding a respective F12.50 and F12.80 to F124.40 and F128.20.

The AEX index strengthened 3.37 to 427.37. Hogovens, which is expected to release 1993 results tomorrow that are broadly expected to reveal another substantial loss, gained F1.50 to F168.70. Analysts expect the steel group to begin its return to profitable operation in 1994, with the likelihood also that dividend payments will be resumed.

Wolters Kluwer, the publisher, which satisfied investors with its 23 per cent gain in 1993 profits, added F1.50 to F119.50.

ZURICH finished higher on the back of firmer US bonds, which rose after the release of the US PFI figures. The SMI index rose 36.4 or 1.3 per cent to 2,906.9 but trading volume remained low. Roche certificates, the most

long-term credit ratings under review for possible downgrade. The recently privatised banks remained firm. DMI rose 1.27 to L12,640, and Credito Italiano put on L15 to L2,658. BCI added L125 to L6,337, ahead of the first quotation tomorrow of its privatisation shares. The new shares, sold by public offer at L5,400 without the L200 dividend, were quoted on the London grey market yesterday at around L6,100.

MADRID gave credit to futures, foreign bourses and domestic bonds as the general index rose 4.35 to 345.23 after a last minute spurt of buying.

Turnover rose to Pt23.14bn. There were specific interest rate hopes ahead of tomorrow's Bundesbank meeting, and the interest-rate sensitive utilities responded, showing the best gains of the day with Iberdrola, the most active stock, Pt25 higher at Pt41.05.

TEI, AVIV broke a four-session losing streak on buying by domestic pension funds, the Mifistman index shooting up by 13.2, or 6.75 per cent to 208.82. This followed share price manipulation scandals which had dropped the blue chip index by nearly 25 per cent from its 1994 high.

Written and edited by William Roche, John Pitt and Michael Morgan

Venezuelan equities are upset by tax proposal

Transaction costs could rise, writes Joseph Mann

A new tax proposed last week by the Venezuelan government covering most debt transactions at domestic banks has sent tremors through the Caracas stock exchange.

On March 9, Mr Julio Sosa Rodriguez, Venezuela's minister of finance, presented a series of tax bills to congress, including a proposed tax of 0.75 per cent on debt transactions at banks that will primarily affect the country's private sector.

On the same day, the Caracas index reacted with a 4.3 per cent decline, and over the week retreated more than 10 per cent in local currency terms.

The index recovered more than 3 per cent on Monday, but at midday yesterday, prices were beginning to weaken once more. The market underperformed the region last year, showing a 14 per cent gain in dollar terms, while turnover slipped by 23 per cent compared with 1992.

Although equity investors in Venezuela were - and are - worried about a number of problems, the proposed debt tax, as it is now being called, has given them a new headache.

The tax, still to be approved by congress, has also raised fears that trading will move offshore and that foreign investors will find the country's equity market less attractive.

With some exceptions, banks will deduct the tax from the accounts of individuals or companies whenever they order a debit to their accounts, including issuing cheques or making an electronic payment.

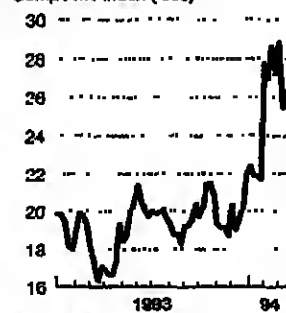
A stock transaction requires at least four cheques or debit orders, each of which would be taxed under the proposal. The new levy would increase transaction costs significantly for domestic investors, and would

have an even greater effect on foreigners.

Ms Norys Aguirre, president of the stock exchange - the Bolsa de Valores de Caracas - has asked the government to exclude exchange transactions from the proposed levy. She warned that investors, especially from overseas, would be driven away, noting that the tax would have theoretically

Venezuela

Composite Index (000)



Source: Datastream

added more than \$5m to last year's transaction costs.

Brokers and investors are also worried that stock deals will simply move offshore in an effort to avoid the tax. Ms Aguirre pointed out that a similar tax in Argentina was eliminated soon after it was applied and that the authorities realised that much of that stock exchange's activities had moved to Uruguay; many Argentinians also decided to carry out their daily business activities in cash rather than cheques.

The government has tried to soften the impact of the debt tax by noting that it will only be in effect until December 31 and that, originally, a tax of 3 per cent had been discussed.

The new tax is a sign of the desperate fiscal situation of President Rafael Caldera's administration, which took

office on February 2. It is trying to cope with an economy in recession, a large fiscal deficit, high inflation, declining income from oil exports (one of its main sources of Treasury revenue), a banking crisis and other problems. It also hopes to raise additional revenues through a proposed luxury tax and aims to reduce income tax evasion.

Another tax initiative involves lifting the ceiling on corporate and individual income tax from 30 per cent to 34 per cent. While this is not a crippling increase, businessmen generally are unhappy as they work their way through the second year of a recessionary economy.

The failure last January of Banco Latino, the country's second largest bank, created an unexpected problem for the new government and provoked crises at several other banks. The cash-strapped government has so far been forced to supply Latino and other troubled banks with some \$3bn in financial assistance.

No-one can say for sure how the debt tax will fare in the new congress, where the two political parties supporting Mr Caldera together hold under 25 per cent of seats in both the chamber of deputies and the senate. The proposal got off to a bad start when Mr Henry Ramos, a spokesman for the Democratic Action Party (AD), said the tax had never worked anywhere else.

Mr Caldera's parties need the support of one of the other three, larger political blocs in congress in order to gain approval of the debt tax and other tax proposals. So far, none of the three groups - AD, the Christian Democrats or the left wing Radical Cause party - has indicated that it will back the president.

Tokyo

Profit-taking following Monday's rally depressed share prices, and the Nikkei 225 average fell 1.25 per cent after moving within a narrow range on technical trading, writes Emiko Terazono in Tokyo.

The index lost 17.30, or 20,508.85 after a day's high of 20,554.17 in the morning and a low of 20,458.85 in the afternoon. Early buying by foreign investors supported equities, but the Nikkei 225 was caught later between profit-taking and arbitrage buying.

Traders were not discouraged by the falls because volume was heavy, with some 550m shares changing hands, against Monday's 514m. A Japanese fund manager said that while share prices still looked expensive on a price/earnings ratio basis, the risk of a fall in values had declined, helped by the fact that the economy seemed to have bottomed out. Rises outpaced falls by 550 to 449, with 147 issues unchanged.

The Topix index of all first section stocks added 3.07 at 1,942.54 and the Nikkei 300 gained 0.43 at 322.31. In London the ISE/Nikkei 50 index firmed 3.75 to 1,353.71.

Machinery issues drew buying after the release of favourable data showing an increase in industry orders. Minebea rose Y33 to Y446 and Nachi Fujikoshi Y9 to Y443.

The yen's retreat against the dollar supported high-technology issues. Sony put on Y30 to Y4,639 and TDK Y50 to Y4,450. However, some issues which had improved on the multimedia theme declined. Nippon Telegraph and Telephone dipped Y3,000 to Y952,000 and Fujitsu eased Y10 to Y1,040.

SOUTH AFRICA

A flurry of activity before the expiry of futures and options lifted equities in late trading. The overall index advanced 98 to 6,354, industrials 105 to 6,099 and golds 3 to 1,967. Anglo climbed R4.50 to R229.50 and SAB R2 to R92.

Mining issues, which had risen in tandem with the gold price, were lower. Mitsui Mining and Smelting declined Y9 to Y416 and Umfolozi Metal Mining Y4 to Y329.

Banks rose on arbitrage buying. Industrial Bank of Japan firmed Y10 to Y3,290 and Sakura Bank Y60 to Y1,280.

In Osaka, the OSE average moved up 65.55 to 22,438.38 in volume of 172.7m shares.

Roundup

Weak turnover and declining share prices typified the region. Kuala Lumpur, Jakarta and Karachi remained closed for holidays.

HONG KONG's turnover was

down from HK\$3.9bn to a provisional HK\$3.47bn, against figures of more than HK\$10bn in late-1993 when the market was booming. The Hang Seng index ended a net 116.51, or 1.2 per cent, down at 9,863.56 after an early 120-point gain.

US funds took profits and selling mainly hit blue chips, with Henderson Land falling HK\$2.75 to HK\$47.75, Sun Hung Kai Properties HK\$1.50 to HK\$58.50 and Hutchison Whampoa HK\$1.25 to HK\$32.25.

TAIWAN saw turnover shrink to its lowest this year, down from T\$40.39bn to T\$34.29bn, as the weighted index finished 59.63, or 1.1 per cent, weaker at 5,274.24, just one point above its 1994 low.

The heavily weighted financial sector was among the biggest losers, with China Trust and China Development down T\$4 apiece to T\$63.50 and T\$115 respectively. It was said that reduced buying by foreign institutions was hurting the market.

COLOMBO blamed foreign inactivity or selling, local institutional profit-taking and a drive for liquidity in the retail market as the all-share index dropped a further 31.92, or 2.5 per cent, to 1,268.38. Turnover expanded from Rs116m to Rs142.8m.

BOMBAY edged up, but brokers said that trade was virtually paralysed by the implementation of a ban by the Securities and Exchange Board of India on forward trading. The BSE 30-share index rose 11.06 to 5,782.33.

The SEBI, India's main regulator for capital markets, had said that the carry forward, or badla system of trading, was leading to excessive speculation, and that it would allow resumption of the system only if stock exchanges implemented several measures to make trading more transparent.

NEW ZEALAND defied the regional trend, the NZSE-40 index moving ahead 27.98 to 2,248.41 as the market found support from stronger European bourses and a more stable local bond market.

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FT-ACQUITIES WORLD INDICES

Jointly compiled by The Financial Times Ltd., Goldman, Sachs & Co. and NatWest Securities Ltd. in conjunction with the Institute of Actuaries and the Faculty of Actuaries

NATIONAL AND REGIONAL MARKETS																
Figures in parentheses show number of lines of stock																
MONDAY MARCH 14 1994																
	US Dollar Index	Day's Change	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	Gross Div. Yield	US Dollar Index	Day's Change	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	1989/94 High	1989/94 Low	Year (year)
Australia (66)	177.12	-2.4	175.71	118.55	155.60	164.01	1.3	3.30	178.04	170.74	114.99	150.94	161.85	189.15	130.19	133.03
Austria (17)	190.11	-0.6	186.59	127.23	165.00	166.89	0.4	0.93	191.16	188.83	127.03	168.75	165.29	195.41	139.03	143.50
Belgium (42)	170.33	-0.2	169.07	114.00	149.93	146.19	0.5	2.90	170.75	168.50	113.47	140.85	145.79	170.78	141.73	144.06
Canada (101)	91.16	0.5	135.11	91.16	118.64	134.12	0.5	2.51	136.48	133.68	90.03	118.18	133.51	143.21	121.45	123.82
Denmark (72)	170.19	-0.28	288.03	180.83	237.36	241.84	0.2	0.96	270.78	267.19	179.83	236.20	241.33	275.79	195.66	199.06
Finland (23)	148.66	-0.1	146.46	102.10	131.48	172.57	0.1	0.84	148.96	147.97	98.86	130.81	172.30	166.72	70.02	73.14
France (91)	178.47	0.8	177.05	119.49	156.78	160.72	1.4	2.89	177.03	174.88	117.84	154.42	158.53	188.37	149.90	154.41
Germany (59)	134.36	1.1	135.27	112.26	119.78	119.79	1.6	1.73	134.84	133.05	88.60	117.82	117.62	142.38	107.88	113.27
Hong Kong (58)	400.41	0.0	405.16	273.38	358.79	408.12	2.0	2.60	406.47	395.11	298.78	352.62	401.17	556.56	235.84	247.88
Ireland (14)	162.53	0.7	191.00	126.86	169.14	180.74	1.2	1.18	191.15	188.62	127.02	169.74	166.95	202.33	140.88	149.96
Italy (89)	77.21	1.1	79.80	51.88	67.83	96.26	1.6	1.75	78.34	75.33	50.73	66.59	64.78	78.93	56.21	59.70
Japan (459)	158.18	0.6	153.92	103.66	134.31	103.86	1.2	0.78	154.38	152.33	102.58	134.68	130.58	165.81	114.51	115.17
Malaysia (62)	140.41	0.0	140.48	108.48	141.16	146.28	0.0	0.07	141.46	140.46	108.48	140.41	140.41	140.41	140.41	140.41
Mexico (18)	218.23	1.2	217.74	167.22	192.83	7825.79	0.2	0.64	218.10	218.37	140.00	180.34	7807.17	2947.08	1431.17	1547.39
Netherlands (26)	202.72	0.5	201.11	135.68	178.08	175.61	1.2	3.11	201.68	199.01	134.02	175.93	173.55	207.43	151.72	151.72
New Zealand (14)	69.16	0.9	69.81	46.29	80.79	83.79	0.3	3.88	69.84	67.64	45.39	69.79	63.55	77.99	45.45	45.19
Norway (23)	201.40	1.3	199.79	134.79	176.92	199.87	1.7	1.64	199.74	196.10	132.08	173.26	196.46	206.42	148.19	148.19
Spain (42)	168.10	0.3	168.10	103.40	134.10	134.10	0.0	0.00	168.10	168.10	103.40	134.10	134.10	134.10	134.10	134.10
South Africa (60)	267.15	1.9	355.02	178.20	234.68	260.07	0.4	2.10	264.85	261.34	178.20	234.68	260.07	260.07	260.07	260.07
Sweden (26)	148.10	1.3	148.10	96.12	130.10	155.31	1.7	1.47	148.14	144.20	97.11	127.37	152.78	153.79	135.78	125.37
Switzerland (20)	222.29	1.0	222.65	148.94	195.37	206.59	1.3	3.55	220.18	217.26	146.31	192.07	203.23	230.02	194.79	190.40
Taiwan (16)	163.45	0.2	163.45	109.39	143.99	145.16	1.3	1.55	163.18	161.01	108.43	145.54	135.33	176.56	127.27	128.99
United Kingdom (215)	198.58	0.2	198.57	132.99	174.19	197.26	1.3	2.78	198.71	197.16	129.26	172.09	194.67	205.45	175.17	175.17
USA (516)	190.56	0.2	186.65	127.27	167.05	190.18	0.2	2.78	189.71	187.16	126.06	166.85	188.71	196.04	176.91	183.72
EUROPE (73)	170.50	0.7	168.14	114.11	148.78	162.22	1.3	2.28	169.32	167.08	112.92	147.70	180.14	178.58	138.88	135.03
Nordest (113)	214.68	0.2	219.96	143.68	166.69	217.85	0.9	1.26	213.74	210.64	141.15	186.20	210.70	220.00	145.85	145.85
Pacific Basin (22)	184.74	0.8	163.43	110.26	144.71	134.87	1.2	1.61	163.76	161.89	108.82	142.85	131.35	168.80	110.11	120.28
Asia (11)	168.81	0.2	168.81	106.81	134.81	134.81	0.2	1.06	163.92	163.72	110.76	144.71	131.75	170.78	127.12	127.12
North America (829)	168.81	0.2	168.81	125.03	164.11	198.81	0.2	1.06	163.92	163.72	110.76	144.71	131.75	170.78	127.12	127.12
Europe Ex. UK (30)	151.81	0.7	150.60	100.81	131.96	147.21	1.4	2.89	150.12	146.72	101.18	131.47	139.30	155.77	120.02	120.02
Pacific Ex. Japan (23)	258.18	1.1	258.12	172.80	206.81	296.40	0.8	2.59	255.36	251.67	169.89	222.54	296.21	304.14	170.31	170.31
World Ex. US (1652)	166.45	0.5	167.10	116.74	147.98	136.64	1.2	1.82	167.38	165.14	117.21	145.99	163.05	172.51	126.25	126.99
World Ex. Japan (170)	168.81	0.2	168.81	115.08	147.98	136.64	1.2	1.82	167.38	165.14	117.21	145.99	163.05	172.51	126.25	126.99
World Ex. So. Af. (210)	174.45	0.5	172.70	116.51	152.83	152.53	0.8	2.16	173.25	170.93	115.11	151.11	151.26	175.96	142.40	142.40
World Ex. Japan (170)	168.81	0.5	168.45	115.25	164.32	162.31	0.7	2.14	168.02	165.81	112.61	162.26	181.29	175.29	163.82	164.42
The World Index (210)	174.65	0.5	170.25	116.59	163.42	153.40	0.8	2.78	173.02	171.45	115.66	151.58	152.13	173.73	143.61	148.48

INFORMATION AND COMMUNICATIONS TECHNOLOGY

Wednesday March 16 1994

IN THIS 20 PAGE SURVEY

A whirlwind of innovation

The key technologies emerging as the catalyst of the next wave of business and social change have computing power and communications in common. Business assumptions will be repeatedly challenged in the next few years as technological advances sweep the world of communications. Multimedia, mobile computing and groupware are among the hot topics, says Alan Cane. Page 2

Shoot-out looms in the PC world: Apple Computer's introduction of the first PowerPC Macintosh personal computer blows the starting whistle on what promises to be one of the toughest technology competitions in the history of the personal computer industry. Page 2

The multimedia race: Microsoft, the world's largest personal computer software company, is harnessing its resources to a new goal: leadership in the design of multimedia systems. It is already investing over \$100m a year - out of a research and development budget of \$475m - on the critical operating software. Bill Gates, (pictured here), the founder and chairman of Microsoft, pious scorn on most of the multimedia trials in the US and Europe. Page 3



Foes for all banking activities: Faced with mounting competition, the banks can no longer survive without persistent investment in information technology, despite its high cost. Page 4

Shopping in the future: Home shopping: in the long term, customers may not really stare at video screens at home, but instead - a prospect that still sounds like science-fiction - they may don headsets that allow them to wander around virtual reality stores, or even virtual shopping malls, writes Neil Buckley. Page 5

Advances in the electronic office: The paperless office is as far off as ever for what might be termed wide-ranging jobs. But for highly structured tasks, such as handling insurance claims or invoices, cutting down on paper can lead to substantial gains in productivity, writes Jola Shillingford. Page 5

Network expansion: Demand for space on computer networks keeps exceeding supply, writes George Black. Users are putting their hopes on ATM - Asynchronous Transfer Mode. Page 6

Computer industry in transition: The seismic trauma that has rocked the computer industry in the early 1990s is not just the result of a recession - it is the result of a fundamental shift in technology. Philip Manchester looks at network developments and the business benefits of client-server systems. Page 6

Big telecom operators seek alliances: The emergence of global service providers able to meet the needs of multinational corporations is being slowed by cultural and technical problems, writes Mark Newman. Page 7

Tricky balancing act for equipment vendors: Leading telecommunications equipment suppliers are well-placed to benefit from emerging Asian markets growth, but they will have to get the balance right between selling old products into new markets, and bringing out new products for their older customers in the western world. Page 8



Global mobile communications: Paul Guley charts the rapid progress towards a mobile millennium in communications. Page 8

Outsourcing: a make-or-buy factor: With the term 'computer services', emphasis is shifting away from computers and towards services. That is one reason why companies once devoted to hardware or software are moving into facilities management, explains Claire Gooding. Page 12

Business Software Challenge: Once again, the UK's young software designers have the opportunity to win cash, hardware and software prizes to the value of £20,000 in the Business Software Challenge '90s design competition - just launched, for its fourth year. Page 12

History often repeats itself: Retrospective: the development of Britain's computer manufacturing industry ran into problems from the start. Genius was let down by poor marketing and lack of government funding, writes John Kavanagh. Page 13

Moves towards systems integration: The perceived demand for systems integration has attracted a growing number of supplier and services companies. It looks like an expensive option for the foreseeable future, writes Philip Manchester. Page 15

Cutting down the paperwork: Case studies on how companies are successfully applying document image processing. Page 15

Now devices great expectations: Personal digital assistants (PDAs) and personal communicators represent the next big computer market. These small computer devices represent the logical progression of computer technologies as they move from the desktop, to portable computers, to the lap-top and finally to the so-called palm-top. Page 16

Innovate or perish: Canada's companies in the IT arena demonstrate that to survive, suppliers have to show greater speed and originality than their US competitors. Page 16

IF YOU'RE GOING TO START LOOKING AT SHOES I'LL GO AND WAIT IN THE VIRTUALLY REAL CAR



The interaction of created worlds: The prospects for virtual reality systems: the convergence of computers and communications is speeding developments in this area. Page 17

The factory of the future: After 20 years of dramatic developments in information technology used by manufacturers - from the earliest computer-aided design systems to modern relational databases and shopfloor management systems - there is no let-up in the pace of change, writes Andrew Baxter. Page 18

The key to faster software: In the ultra-competitive business world of the 1990s, a company's ability to create new information systems rapidly is a pre-requisite for survival. Page 19

Weak links mean big risks: As increasing amounts of data are moved around the world, the need to maintain security and integrity has become paramount. Page 19

Editorial production: Michael Wiltshire

The shape of things to come

Floating down a Venetian canal or walking under the arched ceilings of a medieval cathedral could all happen in the not-too-distant future without the traveller leaving the armchair - see picture, right.

By holding a spaceball - that replaces the remote control pad - the armchair traveller can explore the world through a virtual reality interface and enhanced three-dimensional-type pictures on the home TV. This futuristic tourism is just one of the TV-based home services being developed by BT Laboratories at Martlesham Heath, near Ipswich in Suffolk.

Known as VRHS (for virtual reality home services), engineers are working on a range of intuitive interfaces that could transform the way that TV is viewed.

Pictured left is AT&T's video-conference system - the result of the collaboration between the information systems and business equipment units.



AT&T's desktop video system at the Network Operations Centre in Bedminster, New Jersey. It brings together telephony and computing in a digital telephone and visual system that allows callers to see one another in a window on their screens while they work on documents.



Sightseeing by spaceball: designer Andrew McGrath uses a virtual reality system to explore the antiquities of a sixth century basilica, created on screen. These systems could also create a virtual shopping mall where items such as clothes could be viewed. There are also financial, educational and entertainment scenarios.

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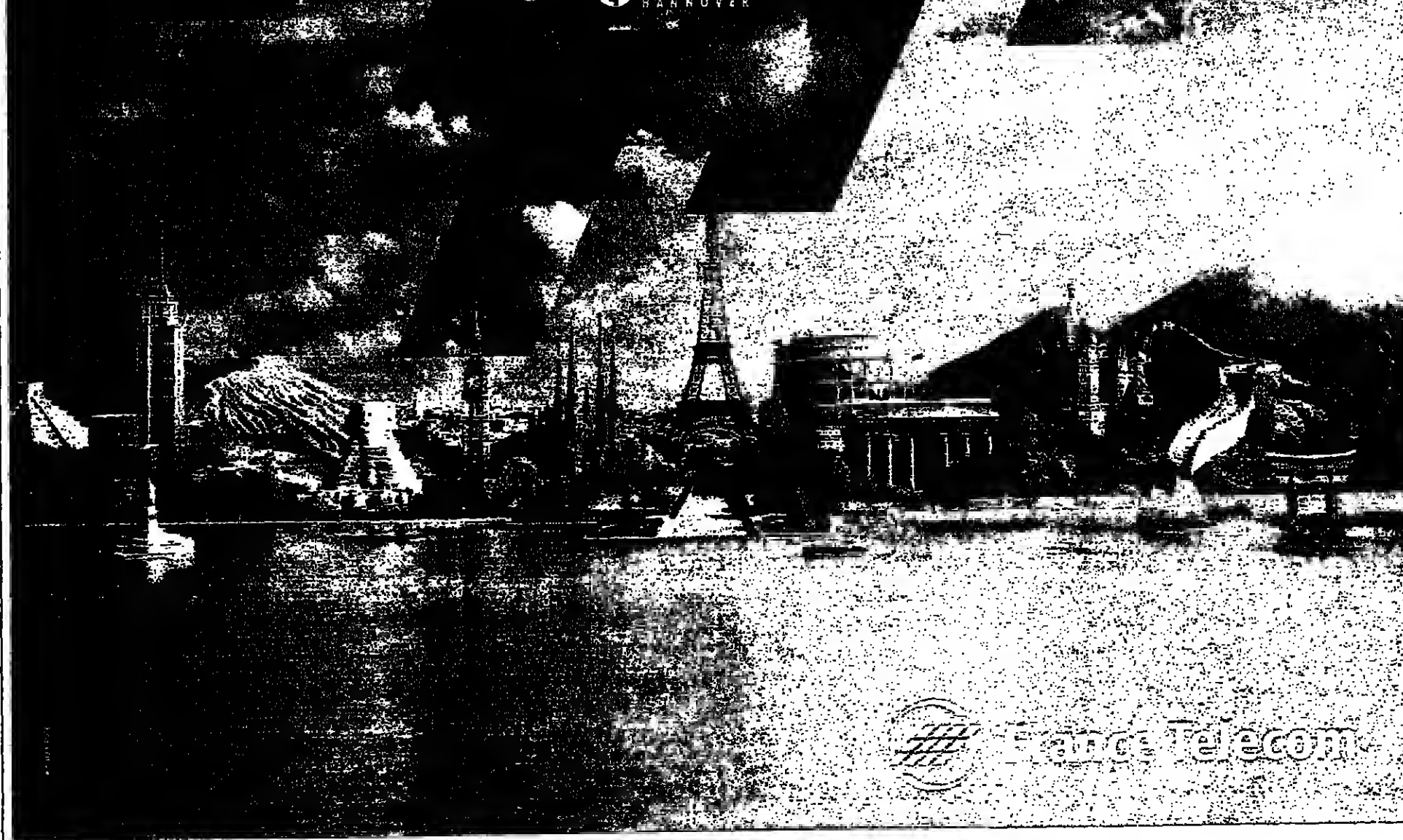
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France Telecom

Information and communications technology 3

■ MULTIMEDIA IN THE OFFICE

'Evolutionary rather than revolutionary'

Microsoft, the world's largest personal computer software company, is harnessing its resources to a new goal: leadership in the design of multimedia systems.

It is already investing over \$100m a year - out of an research and development budget of \$473m - on the critical operating software. Mr Bill Gates, the company's founder and chairman, said earlier this month that the company had more people working on multimedia than any other software group.

The implication is that the company wants to establish its software as the global standard in multimedia just as its MS/DOS and Windows operating systems are the world standard for IBM's design of personal computers. There have been some early clues: Microsoft is already working with Sega, the Japanese games console manufacturer, on an operating system for a new machine, although Mr Gates says the project is small and divorced from Microsoft's mainline operating systems development.

Some weeks ago, it bought Soft Image, a Canadian company which is market

leader in the esoteric discipline of software for moving picture animation. The special effects in the film *Jurassic Park* are its work.

Furthermore, it has announced it intends to test its multimedia software in collaboration with TeleCommunications Inc. (TCI), the largest US cable operator. A first fruit from the venture will be a new channel of programming aimed at the consumer market for computer hardware, software and accessories.

What Microsoft intends to provide is the operating software which will manage the flow of information of all kinds on to high speed networks and the software which will connect it to personal computer operating systems in the home or office. It may also provide some of the applications - a personal money management program, for example.

Mr Gates says "there are a lot of companies involved in operating systems in the home or office. They are jockeying to take advantage of what are expected to be lucrative new business

opportunities. Bill Gates, however, argues that most are taking the wrong approach - "dead ends" were how he described them - "because the user-interface is so simple, and because they do not tie in to personal computers in the right way, the results will be disappointing. The revenue and the usage that comes out of them will not justify the huge infrastructure costs."

While most of the trials to date have been designed to exploit domestic multimedia, offering, typically, menus of video films for home viewing, Mr Gates says that business will make use of the multimedia first.

"The first widespread use of these capabilities will be in business," he predicted. "It will involve things like video-conferencing and collaboration which would enable you to do your job without going into the office. Or it could help companies find expertise to help them out without the expert having to travel. The network itself could create electronic markets able to find a resource of any type."

"So, what in the past we have seen as electronic markets for currencies or stocks will move into items of all types where checking references and other kinds of working together can be done very effectively in electronic form."

"This will be done by extending the range of the personal computer. One of the early symptoms will be very low cost video conferencing where a PC is connected up to an ISDN (integrated services digital network). Within two or three years this will be extremely widespread. (Intel, which makes the microprocessors used in the majority of the world's personal computers, earlier this year announced a low-cost set of components capable of turning a personal computer into a video-conferencing terminal).

Mr Gates thought that multimedia in the office would be evolutionary rather than revolutionary, driven by proven technologies like electronic mail - "the benefits of electronic mail are unbelievable. We could not run Microsoft without that capability."

"Today, some think of electronic mail and work group software and the Internet (an open, publicly available computer network spanning several continents) as separate things, but with some enhancements to Windows due in less than a year, we will bring all these things together."

Once the technology and benefits have been established in a business environment, that would be the time to move into the home.

Mr Gates was critical of the narrow range of many of the current multimedia trials: "Some of the early pilots will be particularly embarrassing because they will not have the breadth of applications," he said.

"The network operators running these pilots are acting against their own interests because they are going to prove exactly what they do not want to prove - that there will not be enough revenue generated to justify building the infrastructure."

Until you have a broad range of applications, you will never be able to demonstrate the true potential of these systems. That is why instead of doing crummy pilots in 1994, we will start our trials in 1995."

He extended his criticism to Oracle, the US database specialist with which British Telecommunications has formed an alliance to test



Bill Gates, founder and chairman of Microsoft, believed to be the richest man in America, says the first widespread use of multimedia technology will be in the business world before it spreads to home entertainment

interactive entertainment services in the home. Oracle will provide the software and systems integration: "I'm sure Oracle will change its approach because it is a terrible approach," he said. Bill Gates' comments have

to be seen against a background of intense competition in the nascent multimedia business. Furthermore, he has never been slow to promote Microsoft's efforts and pick holes in the competition.

The multimedia market is still in its infancy, writes Joia Shillingford

Computers which appeal to the senses

Multimedia brings sound and video to the personal computer. Like sex, it promises to appeal to the senses. Unlike sex, multimedia has yet to appeal to a wide audience.

However, one application which seems likely to increase the take-up rate of multimedia is desktop video-conferencing. The technology is also suitable for point-of-sale promotions, interactive educational/training software and - in very skilled hands - designing mul-

timedia presentations.

Here and on the following page we look at two areas with most potential: desktop video-conferencing and multimedia at the point of sale.

■ Desktop video-conferencing: Some computers now come fully equipped for video-conferencing, allowing users to transmit live video images of themselves to other, similarly-equipped users, and to see on their PC the person they are talking to.

For example, Sun Microsystems, the US workstation company, says its new SPARCClassic Unix workstation, which costs £4,340 (\$6,510), is the industry's lowest cost, fully-configured multimedia workstation. This includes camera, real-time video-capture and compression and a storage disk.

But most users will have to buy a multimedia kit if they want to carry out a video-conference in a window on their personal computer.

In April BT and Olivetti will begin selling multimedia kits which allow pc users to do this. The BT-Olivetti kits will cost £3,595; they include a small video camera which sits on top of the PC, a card which slots into the PC, and software.

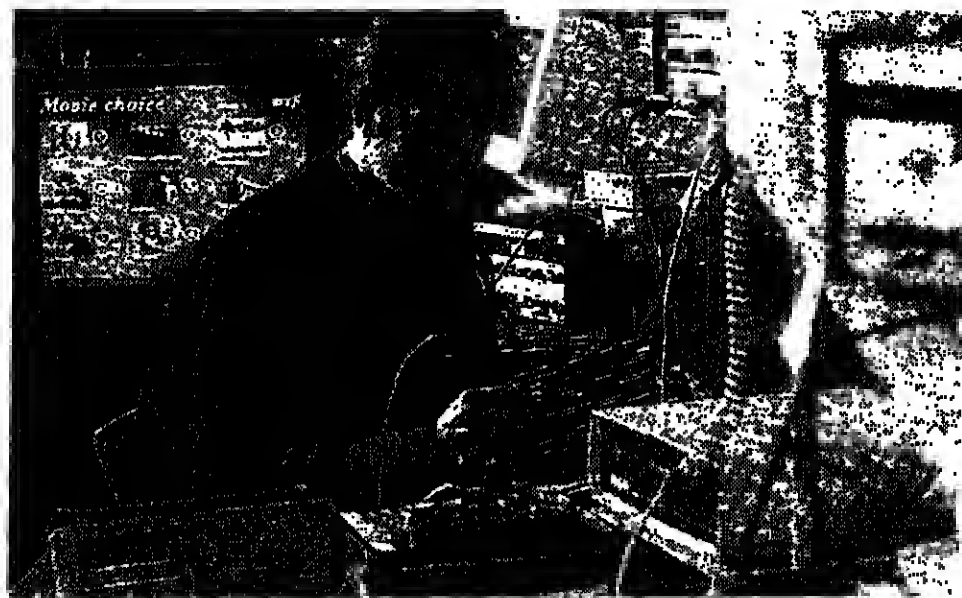
In addition, the kit makes it possible for users to transmit still video images, photographs or sound. BT says the kit will send video at 15-frames a second when it goes on sale.

At this speed, video images will be rather jerky (it may look as if the person you are

talking to has just come back from a boozy lunch). So "meeting" someone for the first time via a desktop video-conference is not ideal if you want to make a good impression. It is more suitable for follow-up "meetings" where being able to see the person you are talking to may give a better idea of their reactions.

Will this form of communication catch on? Yes - according to Judith Jeffcoat, of the research con-

Continued on next page



A telecommunications engineer working on equipment for multimedia services which aim one day to bring entertainment and information services into the home, using the facilities of an ordinary television set and the telephone. Microsoft has had talks with BT among others about multimedia collaboration.

We're more than just talk

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Information and communications technology 4

Michael Dempsey highlights IT applications in finance

Focus for all banking activity

"We don't have warehouses full of cash. We have information about cash - that is our product." Thus, Peter Lazard, head of technology strategy and research at Abbey National sums up the relationship between banking and information technology, (IT).

On the surface, computer technology has become the focus of all banking activity. The real assets of any financial institution are now locked away in digital form. The rise of the technology-driven bank has coincided with fierce commercial pressures and a relentless struggle to keep overheads down.

IT briefly served to offer a 'body graft' during the 1980s. Banks signed up for huge projects on the grounds that more information meant better business. By and large, they ended the decade disillusioned. Computers had proved their worth, handling vast quantities of data but they had not come cheap, and on the way banks found themselves employing a growing army of programmers and systems analysts.

With financial deregulation in the UK, retail banks have

Despite the high cost of applying the latest information technology, the banks - faced with mounting competition - can no longer survive without persistent investment in this area

faced new competitors. Abbey National is a building society turned bank. Lazard notes that Abbey National has used computers for thirty years. Historically this meant large expensive mainframe machines. Falling hardware prices and the advent of the micro-processor saw computing break out of the mainframe world. IT was suddenly available across the board.

"Technology was a barrier, due to cost. Now it is a gateway, an enabler rather than an inhibitor. That is very significant to us," Lazard says.

Abbey National operates systems ranging in size and supplier. Large mainframes from IBM and Unisys still provide the backbone for essential services such as savings, current accounts and insurance packages, but the advent of powerful workstations that do not require IT specialists to drive them has revolutionised the branch network. Abbey National has recently com-

pleted a four-year programme to install rings of workstations linked into local networks in each of its 685 branches.

These Olivetti machines are tied to a dedicated communications workstation at each site, which is networked on a national basis through lines leased from British Telecom. The object of the exercise is data-sharing through the communications host machine. In theory, any member of staff can work with any application on any workstation. The entire branch programme, including banking software, cost £35m.

Over the last seven years Abbey National has invested a total of nearly £200m in IT. Large though it seems, banks can no longer survive without persistent investment in IT, a condition Lazard defines as a growing dependency on information as a product. In theory, IT should allow banks to make better use of that information. One of Abbey National's computers is an AT&T Ter-

data database engine, an extremely powerful box dedicated to analysing customer data. The price tag on the entire Teradata installation is around £10m, but this expensive specialist tool is the only option if Abbey National is to exploit customer profiles and mount direct sales campaigns.

Expert systems are computer programmes designed to replicate and multiply human knowledge. Barclays Bank is employing Lending Advisor to back up decisions on commercial lending. Software licences from supplier Syntelligence cost upwards of £500,000. If the expert system can succeed in producing a coherent and secure lending policy it is money well spent.

The world of the expert system is a clear example of IT coming to be used as a precision tool. In the past, vast banking IT projects stumbled because computers were employed in an indiscriminate fashion. Banks have learnt to

target IT to deal with specific problems. Thus, multimedia, the mixing of sound and video images with data on one screen, is seen as having large potential for banks.

Multimedia computer terminals represent the logical next step in the march of the automatic teller machine. Condensing all the human functions of retail branch banking on to a machine has obvious attractions for institutions determined to slash payrolls.

Some banks are seizing on multimedia to squeeze extra revenue out of existing floor-space. Turin-based San Paolo Bank is installing Olivetti multimedia terminals in its branches. San Paolo rents out space on these machines to third parties who use the interactive video display to sell services. The Trustee Savings Bank (TSB) has 1350 branches, and is experimenting with multimedia equipment from AT&T's NCR arm in two branches, in Newcastle and Watford.

Paul Swainbrook's job as director of Teleservice at the TSB is to set up a telephone banking system. He has



The rise of technology-driven financial centres has coincided with fierce commercial pressures and a relentless struggle to keep overheads down. (Photo: Trevor Humphries)

worked on the multimedia experiments and is blunt about the impact of such technology - "customer shock proved much more powerful than you might think." The TSB discovered that without human intervention, in the form of a Customer Care Officer, its account holders would not do business with a box.

This experiment justified a policy of applying IT in a restrained fashion.

"It's about not being supply-driven," says Swainbrook.

"You start out by asking what the customer wants, and then give him the choice whether or not to use the technology. Why persist with a solution if the customer doesn't want it?"

The TSB is embarking on remote telephone banking courtesy of IT. Cheaper and more powerful computers have enabled banks to set up parallel institutions such as Teleservice within a practical time-frame. Teleservice pools the skills of computer and telephone integration specialist

Datapoint, telecoms provider Mercury and IT supplier Unisys.

The project will cost tens of millions of pounds, but by a judicious marriage of telecoms and IT, TSB will acquire a new banking structure without the overheads of a physical branch network. Teleservice will follow in the steps of Midland Bank's First Direct operation. Technology is the enabler, but public interest is the motivator. Banks are finally taking a firm grip on the IT toolbox.



In the financial world, information technology was once seen as a barrier, due to cost. Now it is a gateway, an enabler rather than an inhibitor. (Photo: Lydia van der Meer)

Continued from previous page

sultancy Ovum. She believes that between 1996 and the end of 1998, revenues from PCs equipped for video will exceed those from conventional videoconferencing equipment.

Suppliers are also upbeat about the potential market. An increasing number have developed desktop videoconferencing products. They include Canada-based Northern Telecom (with the Visio system distributed by UK computer dealers P&P), Intel, the US semiconductor company, AT&T, BT and IBM (with Coo), Apple (in the US) and Olivetti.

Many of these products allow people engaged in a video-conference to point to or edit information they can both see on their screens. Intel says that with its system, users at far-flung sites can edit a report together, both looking at the same version on their screens.

The system is modular and it is possible for US users to buy

the ProShare shared editing software for \$99 without the full videoconferencing kit (which costs \$1,200 to \$2,500). Intel is spending \$100m (\$57m) a year on what it calls personal conferencing technology. Its multimedia kits will go on sale in Europe this year.

To use one of its kits, the user must have a PC based on a powerful microprocessor (486DX or Pentium) and must install an ISDN (Integrated Services Digital Network) telephone line. Most other desktop videoconferencing systems are also designed to work with ISDN, a high-speed digital dial-up service.

Simon Goodwin, of AT&T Global Information Solutions, expects the multimedia market to be worth \$900m by the end of 1995. He believes that growth will be fuelled by three factors: falling prices for multimedia components; the accep-

Big potential for multimedia

ance and roll-out of Euro-ISDN, replacing proprietary national ISDN communication; and the combined efforts of important European industrial participants in exploring new opportunities and requirements for videoconferencing products.

Point-of-sale promotions: Another potential growth area for multimedia is in point-of-sale (POS) devices. These can be used not only to promote products but also to collect information about customer preferences.

Many POS devices developed so far are linked into ISDN, so that they can relay customer orders back to head office or be updated with the latest product and price information.

Examples include: An interactive point-of-sales terminal which Ford plans to use in its car showrooms to enable customers to see the car

of their choice in the colour and configuration they want - for example, four doors, spoilers.

A system which helps a customer to choose a hairstyle from a database of 4,000 styles. Hairstyles can be superimposed on to a video image of the customer's face to see how he/she would look. (Although the system is used by only 18 Belgian hairdressers, Comsys of Belgium, its developers, is undeterred, and has crossed the channel in search of UK business.)

A point-of-sale terminal for a big music retailer. This system, developed by Applied Interactive Marketing (AIM) of Piccadilly Circus, London, allows customers to sample albums which are to be released in the next few months (by selecting a track and a seeing a video clip of the singer). Customers can operate

the terminal using touch-screen commands, and indicate which releases they are interested in buying.

AIM says that developing a multimedia POS system can take as little as three to four months or up to a year and a half. Costs of developing a system range from \$15,000 to \$200,000.

Multimedia at the point of sale has a lot to offer. However, 24 multimedia POS kiosks based in London's Heathrow airport illustrate the main problem with the technology: most people are unfamiliar with multimedia terminals/kiosks and are hesitant to try them out.

The colourful Galleria 21 Heathrow kiosks, designed by the John Herbert Partnership (which was involved in the interior design of Terminal 4), use AT&T's multimedia technology. At first, people spotted

the kiosks and wondered what they were for. Most people did not know - so they did not use them. Now the kiosks have been clearly labelled "Tax free shopping" and AT&T says usage has increased. They allow travellers to use a touch-sensitive screen to order goods via credit card.

The terminal works out how much the goods will cost, based on factors such as which currency is being used in payment, delivery charge, and whether any duty is payable. The goods thus ordered can be delivered to any destination in the world within seven working days.

The tale of the 24 kiosks shows that a multimedia screen has only limited powers of attraction. In order to reach a wider audience, multimedia products must demonstrate clear benefits.

John Shillingford is associate editor of the Financial Times newsletter, Business Computing Brief

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THE ELECTRONIC OFFICE

The paperless office pays off for structured tasks

The paperless office is as far off as ever for what might be termed wide-ranging jobs. But for highly structured tasks, such as handling insurance claims or invoices, cutting down on paper can lead to substantial gains in productivity, writes Joia Shillingford

A number of new technologies make it possible for modern offices to cut back on paperwork - they include image processing (which converts paper documents into electronic images), workflow (which controls the flow of work between a group of workers), electronic mail and electronic data interchange.

Image processing and workflow

At General Accident's 1-2-1 division, which sells insurance directly to the public, a £15 million AT&T GIS image processing system has speeded up claims processing and increased productivity by 20 to 30 per cent.

Bob Thomson, personal lines operations manager for General Accident, says: "We're working in a very competitive environment and wanted to make significant savings. A lot of resources were going into filing and looking for paper, and we wanted all documents to be accessible from a single source."

Now the 1,000 to 1,500 items that arrive in the post every day are scanned into the image processing system and assembled into electronic files, which can be viewed on a computer. 1-2-1's staff (who spend most of the time on the phone) thus have everything they need to work on a claim on screen, without having to get up and look for files.

Image processing and workflow software are also being used at the UK offices of US oil company, Amerada Hess. They have enabled the company to process higher volumes of invoices without increasing the number of accounts staff.

Amerada Hess system, developed in conjunction with US image processing company FileNet, scans every paper invoice into a computer system.

If the invoice is straightforward and the goods have been received and match the original purchase order, the bill is paid. If it needs to be verified by an engineer or a senior accountant, it is sent to their computer screens electronically via Digital Equipment's Teamlinks package.

Once approved the invoice is automatically sent to the general ledger department for a cheque to be issued. The system is faster and more efficient than the old system in which all accounting information was typed in to the computer from a paper invoice, and sometimes

added to by an engineer or accountant, and it now takes only minutes to locate one of the 50,000 invoices Amerada receives each year, rather than a day or longer.

Electronic mail

However, image processing and workflow are not the only route to reducing paper. David Ferris, a British-born but US-based electronic mail (e-mail) consultant says that use of e-mail can cut back on paper and give huge gains in productivity.

He says that these gains will not necessarily come from interpersonal messaging of the "Are you free for lunch on Friday" variety, but rather from the use of "mail-enabled" applications, where an application such as word processing or electronic forms has an e-mail option built in. Mr Ferris says: "Automating simple business forms, such as expenses, can cut a company's costs by between one and two per cent of revenues."

For example, time sheets created using JetForm software and sent via Lotus Development's cc:Mail or Microsoft Mail, save California-based diskette-maker and CD-ROM duplicator, Trace \$270 a year per employee. The system costs \$44 a year per employee, giving a financial return of more than 400 per cent a year.

E-mail can also provide other, less measurable benefits, such as improved decision making, better communication across time zones, more up-to-date market information, faster reactions to unexpected events, and shorter product-development times from geographically dispersed teams.

E-mail can be used on all sorts of computer, but the fastest growing area of the market is e-mail for local-area networks of PCs.

Another growth area is e-mail for executives who spend a lot of time out of the office. One of the latest prod-



City of London dealers: high-speed financial transactions are almost entirely completed on-screen and by phone

ucts designed for mobile e-mail users is Lotus' cc:Mail Remote for Windows. This allows executives to exchange messages with their in-house LAN e-mail system and keep in touch with what is going on back at base.

Larry Crume, vice president of messaging at Lotus, predicts that it will be the company's biggest selling product this year and could hit sales of a million copies.

Electronic data interchange

At present, many large companies use e-mail primarily for internal communications. By contrast, electronic data interchange (EDI) is used mainly for inter-company communications, where cutting out paper can significantly speed up the processing and transmission of information. (EDI or paperless trading is the name given to the exchange of structured business documents, such as orders and invoices, directly between computers.)

For example, a sales manage-

ment system underpinned by GE Information Service's public EDI network, helped to cut the time it took for US orders to arrive at Benetton's Italian clothing factories from three-to ten days to just hours.

Use of EDI is expanding. In Britain, 8,400 companies have adopted it and new types of paperless EDI message are being developed all the time. For example, a UK EDI standard for utility bills has been developed and is waiting for European endorsement, and despatch and binding messages are being developed for users in printing and publishing.

But large scale users of EDI have one big problem - how to communicate with even very small suppliers or customers via EDI.

One solution is to use what is known as hybrid EDI where those who aren't equipped to receive EDI documents electronically receive them on paper. A number of options are

available including BT's EDI-to-fax service for its EDI*Net customers and the Royal Mail's Edipost (EDI-to-post). Here, EDI messages are sent to the Royal Mail's electronic data centre and then converted to paper for delivery by post. Recipients can phone back their responses, which in turn will be converted into EDI messages.

Barriers to the paperless office

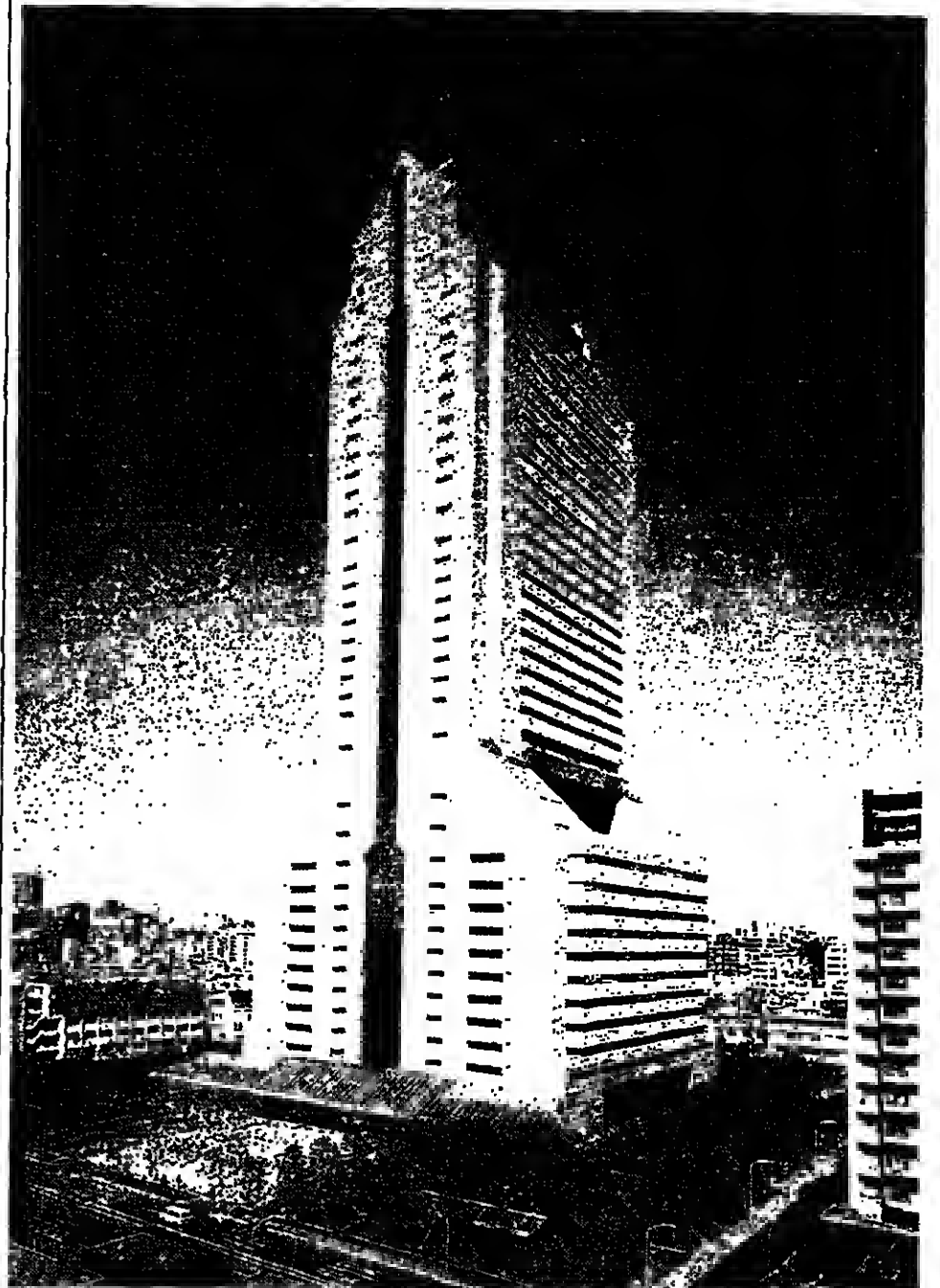
Hybrid EDI is a sensible compromise but it underlines just how difficult it is to get rid of paper when paper is accessible to every business from the corner shop to the multinational.

Another problem is that electronic images of paper documents are not legally admissible in court, even though they can include signatures, and are difficult to alter.

For example, Amerada Hess files copies of its paper invoices, in case its auditors, consortia partners or the VAT office want to see them, and General Accident is keeping paper records of documents scanned on site for six months before deciding what to do with them. Jeff Goldberg, an analyst at researchers Dataquest, says: "The promised paperless office has become the 'paperfull' office, partly because computers have not yet achieved the readability, or portability, of paper."

This is good news for printer companies - "more and more data is being stored on computers and people want to output it in a variety of ways," says Kevin Spinks, printer business manager at printer company, Lexmark. "This creates more and more paper and the demand for printers is growing at 15 to 20 per cent a year. I can't see the paperless office taking off this century."

Joia Shillingford is editor of the Financial Times newsletter, Business Computing Brief



NEC's Super Tower sets the pace

The Tokyo headquarters of NEC, the electronics company, has one of the world's most advanced commercial communications systems, writes Michael Whitham.

Built on the site where NEC first began operations in 1889, the 43-storey Super Tower, pictured above, features the NEC's Super Aladdin system for total office automation. This includes electronic mail, electronic statement and receipt systems for the collection and distribution of documents, an electronic bulletin board, closed circuit and satellite television services which links NEC's three north American subsidiaries - NEC America, NEC Electronics and NEC Technologies.

Other features used by the 6,000 staff of the Super Tower include electronic telephone notebooks which contain the 35,000 telephone numbers within the company. There are also automatic message services on telephone terminals.

Office facilities of the Super Tower also include electronic secretarial services for setting up schedules and monitoring business progress. Staff work to a flextime system - "this seeks to encourage the self-esteem of company employees by giving them more control and responsibility over their working time," says NEC.

Customers may one day don headsets for a 'virtual reality' armchair walk around their favourite stores, writes Neil Buckley

A whole new shopping experience

Imagine, 20 years from now, a couple want to hold a dinner party but cannot decide what to cook.

They reach for a handset and call up some ideas from an electronic recipe book on the high definition video screen in their living room. Unsure whether one particular dish might be too difficult, they press a button for a video recording of a chef showing how to prepare the meal step-by-step.

Satisfied they can manage, they move on to the wine. Further clicks on the remote control call up video recordings of winemakers wandering around their vineyards, talking about their wines.

The choices made, the couple transmit an order via the handset to their favourite food retailer. A few hours later, the ingredients and wine will be delivered to a special hatch at their home. They may even be delivered at the same time as the couple's regular, weekly shopping order.

Such a vision remains a fantasy. But retailers believe it could be a reality, even a commonplace, by early in the next century. What will make it possible is the conjunction of multi-media technology, allowing sound, pictures, graphics and text to come together on one screen, with fibre-optic technology, enabling huge amounts of information to be sent at high speed to and from consumers' homes.

Technological advances in the past 20 years have revolutionised the way retailers run their businesses, producing huge gains in operating efficiency, but they have not fundamentally changed the shopping experience.



Armchair shopping: technical trials are under way in the western world for new services which promise to create a revolution in 'home shopping'. These facilities bring together the telephone and television set to enable customers to choose and order entertainment and information services via an ordinary TV set.

In the next 20 years, however, technology could revolutionise shopping itself.

It will change the view of shops as simply repositories for goods to be sold to the public. It is also likely to break down the barriers between shopping, recreation, and even education.

The biggest growth area is expected to be TV shopping - already booming in the US. The cable home shopping industry there - dominated by Home Shopping Network and QVC (Quality, Value, Convenience) - where customers watch a succession of products on screen and order by telephone, generated turnover of \$2.3bn last year. So-called "infomercials", advertisements used to sell products directly to the public, pulled in a further \$700m. On-line computer shopping services, in their infancy but expected to mushroom, generated \$300m.

Coopers & Lybrand, which has just completed a year-long, \$1.2m survey with sponsors NCR, Telson and Citicorp into Retailing in the 21st century, says that as the number of available cable channels

increases, conventional shopping channels are expected to proliferate, probably targeted at increasingly narrow age and interest groups.

Established retailers are already seizing upon TV shopping as a potent selling force. Macy's, the US department store group, is launching a shopping channel later this year.

The next stage, as more sophisticated communication networks are developed, could be the grouping together of information providers, network operators and transaction companies. That would enable customers to select purchases and transmit orders to retailers via a remote control, as described above.

An essential part of the growth of such channels is likely to be fast, secure delivery of products to consumers' homes, posing new challenges for retailers.

However, shops as physical entities will not die out. Many consumers will always want the opportunity to examine or try on products before they purchase. Convenience stores

for top-up and impulse purchases are likely to remain indispensable - although they may become more specialised.

But stores will have to ensure they provide a "value-added" shopping experience and come up with new attractions to lure shoppers away from their TV screens.

Technological advances are expected soon to make shopping, especially grocery shopping, less onerous. One way will be to end queues at checkouts by developing shopping trolleys that scan purchases as customers make them and automatically deduct the cost from their credit or charge card.

Symbol Technologies and Videocard have already developed a trolley with a hanket of laser beams across the top which can read barcodes of goods being put into the trolley, from any angle. The trolleys are being trialled in the Netherlands.

The next step may be using silicon chips or tags which can be read by a radio beam on the trolley. A prototype system has been developed by the South African Council for Scientific Continued on next page

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Information and communications technology 6

Philip Manchester looks at network developments and the business benefits of client-server systems

Computer industry in transition

The computer industry fared well in previous recessions because companies turned to automation to save costs and cut staff. But in the early 1990s it was different. Former giants of the industry – such as IBM and DEC – tottered alarmingly and have yet to prove they will survive the upheaval.

The main cause is the transition from centralized, mainframe-based computing to distributed client-server-based computing.

In many ways the transition reflects a wider change which is taking place in industry generally: local autonomy from the distribution of computer power and management responsibility.

Technologically, this change manifests itself in client-server systems – an approach to distributed computing which separates users (clients) and the services they use (servers).

Client-server computing has its origins in database management systems (DBMS) and the trend to separate the software used to access data from the software used to manage it. During the 1980s, developers created a new model for DBMS which allowed these two components to be distributed across computers on a net-

work. The front-end tools – data query languages and local applications – became known as 'clients' and the back-end DBMS 'engines' became known as servers.

Database vendors such as Oracle, Ingres, Sybase and Gupta use this approach in their products with the result that they can all communicate with each other.

A front-end tool from Gupta, for example, can use a back-end DBMS engine from Oracle without the user ever being aware of the location of the data.

Client-server computing extends this idea across the whole system and breaks down functions according to their role either as a client or a server.

In addition to DBMS servers, a modern network will have servers to handle printing, communications, mass storage back up and so on.

This approach can bring many benefits. It allows users greater freedom in their choice of hardware and software – with consequent cost-savings. It makes systems more flexible and provides for better integration of different types of systems.

"We have to tie the benefits

The seismic trauma that has rocked the computer industry in the early 1990s is not just the result of a recession – it is the result of a fundamental shift in technology

to the business and I think client-server does this in four ways," says Mr Lawrence Hunt, director of distributed processing at the UK software company ACT.

"Firstly, client-server is much more flexible than traditional mainframe systems. If you want to get data for management information systems, this is difficult with closed mainframes.

"Secondly, it lets you integrate application more easily. You can integrate a PC-based spreadsheet into a mainframe database much more easily with a client-server approach.

"Thirdly, client-server systems give much more independence from vendors. All business want to future-proof their investment in applications software, which probably represents 80 per cent of the cost of a system. Client-server enables you to do this effectively.

"Finally, client-server systems can cut costs. We were recently installed a client-server system at a large investment bank. The costs came to

about £1.5m. It would have cost £3m if we'd had to use a traditional approach with mainframes," says Mr Hunt.

Other financial institutions have also opted for the client-server approach in a big way. The Nationwide Building Society, for example, has standardised on Microsoft's Windows NT operating system as the lynchpin for a client-server system which will support 10,000 personal computer users over the next three years. It is also looking into the possibility of plugging its Automatic Teller Machine network into the new system with Windows NT as the controlling software.

National Westminster Bank has also adopted Windows NT as the basis for its client-server developments.

Most organisations are adopting a cautious approach to the transition from traditional centralized computer to client-server systems, however.

Paymaster, formerly the Paymaster General's Office, is typical – "we are introducing client-server slowly – function by function. We have started with

electronic mail and access to shared spreadsheet and are moving on to introducing more function on desktop PCs," says Mr Derick Harbottle, director of information technology at Paymaster.

After many years of relying on an ICL mainframe computer to do everything, Paymaster has embarked on an ambitious plan to integrate up to 800 users into a three-layer client-server system using hardware from Olivetti and software from Novell and Oracle.

The ICL mainframe will eventually become no more than a database server.

"We have a heritage of 'legacy' systems on mainframes and we had to see if it was practical to move away from the mainframe. After a rigorous right-sizing study to see if it was feasible, we opted for a staged approach with a pilot project to start," says Mr Harbottle. Paymaster's move to client-server is the result of the same commercial pressure faced by business. Following changes in the UK government's approach to public services and the introduction of market testing, Paymaster has had to become aware of the service it offers its customers.

"We have made the change for sound business reasons. We are forward-looking company and need to do more than sit back and let things just happen," says Mr Harbottle.

He goes on to emphasise that client-server should not be seen as a technology solution – but a business solution which brings greater flexibility to building information systems. He is also wary of expecting too much in the way of cost savings – "some people are talking about the technical issues or the cost-saving issues. We prefer to concentrate on the business benefits which will come from client-

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Client-server systems allow users to integrate applications more easily and have proved to be far more flexible than mainframe systems

server," he explains.

Any move to a new technology is bound to cause new problems and the transition to client-server systems is no exception. Paymaster's cautious approach – with carefully phased introduction of the new system alongside the old, is an

object lesson in how to move to client-server with the minimum amount of pain.

"We try to avoid being at the bleeding edge of technology. Rather than inventing our own, we would rather steel other people's wheels," observes Mr Harbottle.

NETWORK CAPACITY

Users pin hopes on ATM

Demand for space on computer networks keeps exceeding supply, writes George Black

The present structures of local area networks of personal computers, Ethernet and Token Ring, running at 10 megabits and 16 megabits per second respectively, will soon be unable to cope with the growing volume of traffic.

As users compete for communications channels, the actual speed of delivery to each of them is often only a tenth of the network's theoretical capacity. When more users come on to the network, its performance degrades.

Network managers have responded to the rising demand by exploiting existing systems more efficiently. This is one of the main reasons for the enormous growth in sales of devices such as intelligent hubs, bridges and routers in the past couple of years. They have helped a lot, but it will not be enough.

Fibre Distributed Data Interface, running at 100Mbps, has been regarded by many as the probable solution, but it has so far proved too expensive. FDDI and Fast Ethernet, also running at 100Mbps, may be overtaken by ATM (Asynchronous Transfer Mode).

Experts now agree that ATM is the only technology that can give the necessary transmission speed for communicating image, voice and data together in real time at an acceptable price. It can use existing wiring, which will help keep down the cost. It may therefore be what is needed to start the long expected spread of multimedia applications.

Ethernet and Token Ring have suffered from a lack of standards, which has meant a large amount of conversion of data from one format to another. The move to ATM, which is rapidly becoming standardised, may be equivalent to removing official frontier controls.



The largest corporation will probably be the first to take up 'ATM-ready' local area networks to communicate image, voice and data

Unlike its predecessors, ATM uses a technology known as cell relay, which takes advantage of the high speed transmission capacity of fibre optic cables. It handles data in fixed length cells rather than variable length packets, which is thought to be more efficient. This should push the speed of transmission up to a maximum of around 2.4 gigabits per second.

For backbone systems in office and factory buildings, 155Mbps is expected to be the usual speed; 45Mbps may be typical for combined data, voice and video. ATM will not put upper or lower limits on the transmission speed but use that which is appropriate to the application.

Other important advantages of ATM are that it is a much simpler system than the older ones and can be used for both local area and wide area networks, which should further reduce migration costs and ease the task of network management.

ATM was invented to serve the needs of the public telephone companies, but was soon taken over by the pioneering computer companies of California's Silicon Valley.

The ATM Forum, which was set up by the computer companies in 1991 and now has over 200 members, comes out with a new standard every couple of months and is rapidly completing the set which is needed.

It is setting a pace which the telephone companies cannot match. Mr Tim Ward, strategic marketing director for Network Equipment Technologies (NET), a leading company in the forum, admits that there has been a lot of "noise" for ATM but argues that it was necessary.

"It has turned people's attention to ATM as a local area network technology," he says. "ATM-ready" LAN products began to come on to the market in 1992. ATM on LANs is forecast to prove a more

cost-effective solution than on WANs or on the public carriers' services. So it is likely to be adopted for LANs long before the telephone companies have worked out the details of their offerings.

The largest corporations will probably be the first to take up the technology. Banks want it in their dealing rooms, where video and news agency reports may be joined on a single fibre optic feed.

Users are only experimenting with it at the moment: live applications will follow in a year or two. Many of the telephone companies worldwide will introduce their first ATM services this year.

According to Mr Sean Phelan, principal analyst for market research firm Yankee Group Europe, pricing presents them with a dilemma. "If they price it too low they risk cannibalising their current revenues, but if they price it too high the uptake will be very small," he says.

"The arrival of ATM therefore represents a big opportunity for new entrants into the telecommunications business." For most users the big question is when they should try to move to ATM.

A report last year by the Ovum consultancy said that potential users of ATM, especially in Europe, were cynical about it, partly because current ATM products did not match their expectations. Ovum said that ATM provided far more than enough bandwidth but added that this did not translate into the functionality required.

One of the authors of the report, Mr Iain Stevenson, says that their cynicism may be dispelled by a number of new products from hub and router vendors which will be delivered this year. He notes the telephone companies are worried that ATM may leave them "holding the string" for users who have equipment on their premises which is intelligent enough for them to manage their own networks.

"The telephone companies have to get closer to their customers to find out what services they really want," he says. One of the technical concerns about ATM has been that receiving devices may not be able to cope with the throughput. Data cells could get lost in the pipeline and need to be re-sent.

"With only a small disruption an encyclopedia could have gone by," notes Mr Jim Boyle, vice-president of wide area networking for IBM. IBM has stated that ATM is one of its key technology strategies and it is investing heavily in research into network congestion. The design of ATM networks will be difficult, at least until flow control software matures.

Users may therefore be wise to hire systems integrators to build these networks for them.

European contracts for Asynchronous Transfer Mode-based public switches

Country	Operator	Operator	Operator
Belgium	Belgacom	Alcatel	Alcatel
Denmark	Telia Denmark	Alcatel	Siemens
Finland	Telecom Finland	++	Necom
France	France Telecom	Alcatel	Alcatel
Germany	Deutsche Telekom	Alcatel	Alcatel
Ireland	Telecom Eireann	++	Alcatel
Italy	Stet	Alcatel, Ericsson	Alcatel
Netherlands	PTT Telecom	AT&T	AT&T
Norway	Norwegian Telecom	++	Alcatel
Portugal	TTL	Alcatel	Alcatel
Spain	Telefonos	Ericsson	AT&T
Sweden	Telia	AT&T	Ericsson
Switzerland	Swiss PTT	Ericsson	AT&T
UK	BT	Siemens	Siemens

Footnote: ++ indicates purely domestic operator; purely international operator; ++ contracts have yet to be awarded; listed international contracts all involve switches for the pan-European ATM test; source: Financial Times Telecom Markets newsletter

Electronic shoppers will be spoiled for choice

Continued from previous page

and Industrial Research in conjunction with the British Technology Group.

Eventually, however, customers may not need to put goods into trolleys themselves. Supermarkets – and other stores – may display just one example of each product. Customers will walk around the shop and wave a wand across a bar code on the shelf to order and pay for a product. Their order will be assembled behind the scenes by staff.

Surplus selling space might be used instead for cooking classes and demonstrations, or multi-media kiosks offering

information.

For those who do not insist on seeing or handling every item, the process could be taken further. Why walk around a supermarket when you could be, say, enjoying a meal in a restaurant, making selections from an electronic shopping catalogue and picking up your order when you have finished your coffee?

As well as making shopping more enjoyable, advances in information and communications technology will give customers more choice and control. Stores may no longer stock products, but instead offer customers the opportunity, assisted by knowledge-

able staff or consultants, to customise or even design their own merchandise – for example to choose the colour, fabric and precise size they want. Items of clothing to be made in, with the order transmitted instantaneously to a factory and the finished product despatched the same day.

In the US, the Blockbuster retail chain in a venture with IBM is allowing customers to select tracks for and record their own compact discs on the spot.

Japan is experimenting with mobile production units in trucks or vans for goods such as spectacles and contact lenses, which take orders by

telephone and deliver products rapidly to a customer's home or workplace.

Themed and 'experiential' stores, such as those operated by Disney and Warner Brothers, are also expected to increase, using technology such as virtual reality to sell goods.

In the long run, customers may not stare at video screens at home, but instead – a prospect that still sounds like science fiction – don headsets that allow them to wander around virtual reality stores, or even virtual shopping malls.

Developments in virtual reality systems: page 17

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Information and communications technology 7

■ THE BIG TELECOM OPERATORS

A global scramble for partners

The emergence of global service providers able to meet the needs of multinational corporations is being slowed by a range of cultural and technical problems, writes Mark Newman

Telecommunications giants are stumbling towards global alliances which will bring down national barriers and sideline second-division telephone companies.

The telecommunications big boys say alliances are a response to the communications needs of multinational corporations, but, at times, it seems as though the customers are the sideshow, and the main event is a showdown between telephone operators determined to outmanoeuvre each other.

BT carries much of the responsibility for the high levels of activity among the world's largest telephone operators over the last three years. It tried to set up an exclusive partnership with Deutsche Telekom and Nippon Telephone and Telegraph in 1991. This fell apart after Deutsche Telekom insisted on including its French allies, NPT got cold feet, and both the Japanese and the Europeans realised that their competition authorities might not think a joint venture company intent on exercising global competitive strength was a good idea.

In fairness to BT, it saw a market emerging for the provision of global communications



In India, a bored attendant is pictured amid rows of phones during a strike on the Bombay Stock Exchange. Western telecom giants have set their eyes on vast Asian markets. India has about 7m telephones, but just to provide one line for every ten of its 200m middle-class people would mean installing an extra 13m lines. In China, there are plans to increase the number of lines five-fold to 100m lines by the year 2000. *Picture: Reuters*

services, and this has been the motivation behind its attempts to put together worldwide alliances. Many other companies, despite their claims, would be happy to keep the status quo and to exclude BT from their markets.

Events have moved on since 1991: BT has taken a 20-per cent stake in MCI, the second largest US long-distance telephone company, and the two companies are setting up a new company dedicated exclusively to selling services to

multinational corporations; France Telecom and Deutsche Telekom have set up a joint venture company of their own; three second-tier European telephone operators, PTT Telecom Netherlands, Telia of Sweden, and Switzerland's PTT Telecom have set up a venture called Unisource; and American Telephone and Telegraph has also announced a world strategy of its own.

Brokers in the global power game will emerge from these four groupings, but the next few years will see a jockeying for position among the global communications protagonists and the expansion of existing partnerships.

Other telecommunications companies waiting on the sidelines are US long-distance operators, Sprint, Japanese operators, KDDI and NTT, Cable & Wireless, Spain's Telefonica and Telecom Italia, the group that will emerge from the restructuring of Italy's telecommunications services sector, but they will face a number of obstacles along the way which will slow the progress of

global partnerships. The main ones are:

□ US partners: most multinational corporations are headquartered in the US. The idea of a global communications company is that it can deliver services in all of those countries where multinational companies have offices.

A presence in the US, therefore, is vital. Two of the groupings, Unisource and France Telecom/Deutsche Telekom need US partners. AT&T, MCI and Sprint are the three obvious candidates for anyone in search of a US partner.

MCI has already thrown in its lot with BT, so this only leaves AT&T and Sprint. France Telecom and Deutsche Telekom were in serious discussions with AT&T last year with a view to an alliance that would have involved a pooling of international telecommunications activities in a new company but Project Atlantic has broken down following suggestions from the competition

authorities in Brussels that it would fall foul of rules on mergers. A less-ambitious alliance is now under discussion, but this may not satisfy the ambitions of AT&T.

Unisource appeared to be lining up Sprint two years ago when the two sides agreed to interconnect their data communications networks, but the agreement was terminated at the end of last year after Unisource lost one of its first customers, Swedish conglomerate, SKF Group, because of problems with the interconnection of the two networks.

□ Systems integration: telecommunications networks are constructed in different ways and by different manufacturers. When SKF Group cancelled its contract with Unisource, it cited the failure of Unisource and Sprint to provide seamless network integration.

Systems integration will be one of the main tasks facing BT and MCI when they construct a global network platform. Customers in the US will connect on to MCI's network, while BT is installing network facilities in Europe.

□ Old friends: partnerships already exist between international telephone operators. When a UK company orders an international private circuit from BT, for example, from London to Paris, BT has to liaise with France Telecom for the half-circuit on the French side. Similarly, international telephone operators have to pay each other for delivering calls to their customers.

Accounts are settled according to the international settlements procedure. Complications arise when a country has more than one international operator. For example, the UK has BT and Mercury, while the US has three large international carriers, AT&T, MCI and Sprint.

In this case, BT would divide its international outgoing traffic between the US operators according to the market share of the three operators for international calls from the US.

AT&T has roughly 60 per cent of the US long-distance market, so it receives 60 per



Cable and Wireless earth satellite station in Hong Kong. More than 85 per cent of the population now have telephones. *Picture: Hugo Routledge*

cent of all incoming calls. This business is highly lucrative as the settlements procedure sets prices at above cost. If AT&T was to side against large international operators, it could threaten existing relationships. This explains why AT&T says it would prefer to offer global services in partnership with state-owned telephone companies rather than in competition with them.

□ Regulation: few countries allow competition with state-owned telephone operators in basic voice telephone services. In Europe, restrictions will not be removed until 1998, although many companies are already exploiting uncertainties about the rules for competition in services to closed user groups. Global alliances will also attract scrutiny from both national and regional governmental bodies.

BT's acquisition of a 20 per cent stake in MCI had to go before the US State Department and Department of Justice, as well as the Federal Communications Commission, the telecommunications regulatory authority. It also needed clearance from the European Commission.

An alliance between AT&T, France Telecom and Deutsche Telekom would face even closer scrutiny, and is the main reason for the decision of the three operators to seek a less-ambitious alliance than was originally envisaged.

Outsourcing: global alliances are founded on the assumption that multinational corporations will, over the next few years, decide to outsource their telecommunications networks to third parties. But Mr Lenny Elefenbein, the managing director of US telecommunications consultancy, Lynx Technologies, notes that "while an impressive number of users

have put out requests for information, very few have actually awarded their businesses to one of the carriers."

He says that even the large carriers have been confused by the high ratio of activity to closed deals and that several of them have commissioned internal studies to determine "why they are not getting their share of the perceived big outsourcing bonanza."

□ Cultures: while MCI is an aggressive, marketing-driven company, BT is still making the transition from a government department nine years after its privatisation and ten years after the ending of its monopoly. Many observers question the ability of the two companies to work together effectively.

The problems will be even greater for other transatlantic partnerships. Other telephone companies in Europe are still under state-control and have not even begun to make the transition to commercially-run companies that BT started in the late 1980s.

There will be other problems along the way, many of them arising as global consortia threaten to take lucrative business contracts from state-owned telephone operators in smaller countries, leaving them only with the unprofitable residential customers.

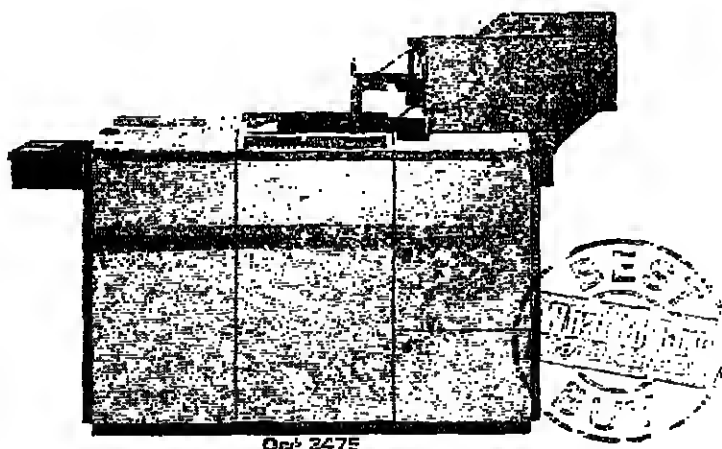
A momentum has built up behind the formation of global alliances which will assure their emergence, but there will be problems along the way, and big businesses - in whose interests the alliances are being formed - will have to wait a little longer before operators deliver the services that match their global service claims.

The writer, Mark Newman, is editor of the FT newsletter, *Telecom Markets*

The world's ten largest telecommunications operators*

Operator	Country	Revenue 1992 (\$m)	% change 1991-92	Lines (m) 1992	% change 1991-92
NTT †	Japan	51,353	1.7	57	2.7
AT&T**	US	39,580	2.0	n/a	n/a
DBP Telekom	Germany	34,550	14.3	35	5.6
BT †	UK	23,379	(0.7)	26	1.9
France Telecom	France	23,164	5.9	30	3.4
SIP	Italy	17,492	10.8	24	2.8
BellSouth	US	15,202	5.2	19	3.4
Nynex	US	13,155	(0.9)	16	1.9
GTE	US	12,644	0.6	17	3.6
Bell Atlantic	US	12,093	2.5	18	2.4
TOTAL		242,613	7.1	242	3.2

*Ranked by 1992 revenue; **AT&T does not offer local exchange line services; † indicates year ending March 31, 1993. Source: Financial Times Telecom Markets Newsletter



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Information and communications technology 8

TELECOM EQUIPMENT SUPPLIERS

A tricky balancing act for leading vendors

There is substantial uncertainty in the international market for public telecommunications "which is characterised by lower investment and intensifying price competition particularly in the major industrialised countries" - this was the gloomy prognosis for telecom equipment suppliers, given by the Swedish manufacturer Ericsson, during its 1993 results meeting.

Five years ago this kind of outlook would have been deeply damaging for a company like Ericsson. In common with its rivals in Europe - Alcatel and Siemens - Ericsson placed a heavy reliance on the sale of switching equipment to state-owned telephone companies in western Europe. But Ericsson's focus has changed over the last two to three years. Mobile communications is now its core business. And while Europe remains an important market for sales of switching equipment, Ericsson is increasingly tapping emerging markets such as India and China for new sales.

The telecom equipment market today is undergoing rapid change both in terms of the products that are manufactured and the markets where they are sold. Big business users are demanding high-speed broadband services to send massive volumes of data backwards and forwards between their offices scattered across the world. Radio is becoming the cheaper than copper for access to long-distance networks. And the term 'multimedia' is causing panic among equipment vendors. They will undoubtedly play a role in building multimedia networks.

But software is the key to multimedia and if equipment vendors fail to reach alliances with software companies, they may be left behind. The leading equipment suppliers such as Alcatel, Siemens, American Telephone and Telegraph and Northern Telecom are still making public switches.

But most state-owned telephone companies in western Europe and North America are now reducing their investment

levels. They have digitalised their long-distance networks and modernisation of local networks for low-spending residential customers is proceeding at a slower rate. Recession - first in North America and now in Europe - has also taken its toll.

Increasingly, switch suppliers are targeting the emerging Asian markets.

China is the biggest prize and its requirements are so immense that there is room for all suppliers. Ian Macleod, a telecommunications analyst at Natwest Seller in Paris, calculates that in 1992, total line deliveries (switch orders are expressed in terms of the number of lines that can be connected) to China came to around four million.

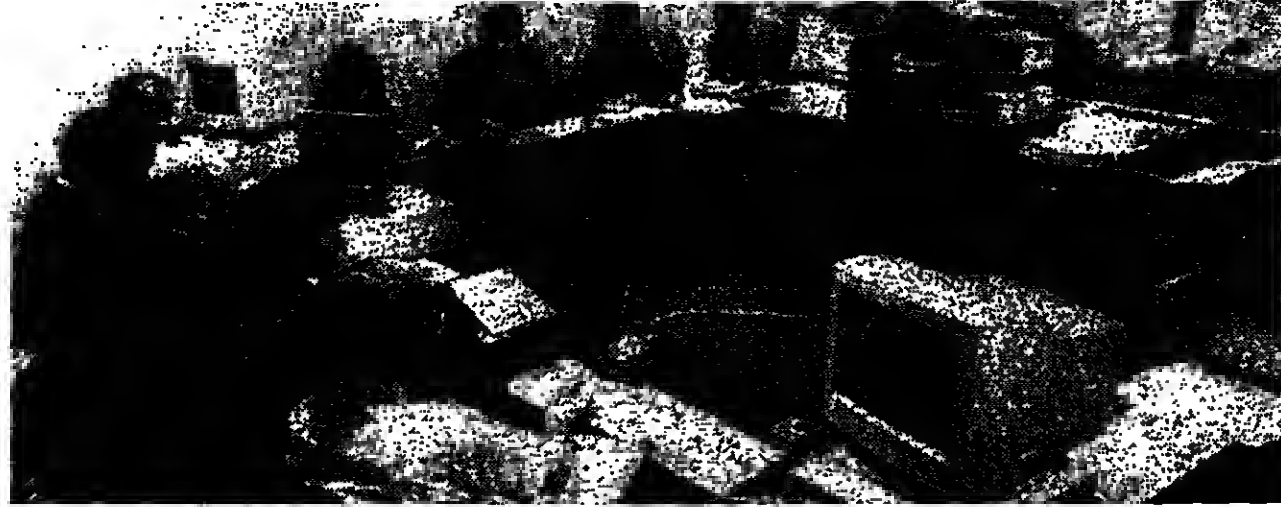
He estimates that the figure doubled to eight million in 1993, and that by 1996, orders could be running at 12m lines a year. To raise telephone penetration to its planned level of 10 per cent by the end of the decade, China will have to buy 100m lines between 1992 and 2000.

India's expansion programme will require the instal-

Leading equipment suppliers are well-placed to benefit from emerging Asian markets growth, but they will have to get the balance right between selling old products into new markets, and bringing out new products for their older customers in the western world

lation of 18m lines over the same period. Major suppliers to Asia such as Alcatel and Ericsson are gradually moving manufacturing facilities into local markets. There are clear benefits to be had.

Production costs are lower than in Europe or North America. But this is not the prime motivating factor. In many cases, governments insist on



Stock market dealers in Hungary. Eastern Europe offers great scope for telecom equipment suppliers

Picture: Paul O'Donnell

local manufacture to provide jobs and prepare the way for indigenous production. Some governments in eastern Europe make the acquisition of local production facilities a pre-condition of contract awards. Otherwise, the local manufacturers which supplied the national telephone companies during the Cold War would inevitably face closure.

But it would be a mistake to imagine that western manufacturers are packing their bags and heading east. Sales into developing markets are more of an expansion than a re-orientation.

The riches are still in Western Europe and North America, although the importance of public switching equipment is inevitably in decline. Alcatel, the world's largest telecom equipment manufacturer, still relies on Europe for 75 per cent of its sales.

Driven by a wave of liberalisation, the European telecommunications equipment market will undergo radical change over coming years. The cosy relationship between state-owned telephone companies and local manufacturers will be forced apart as new operators attack the lucrative international and business communications markets.

Closed markets will open as state-owned telephone companies begin to behave like

proper commercially-run companies. And national champions such as Siemens and Alcatel will respond by selling their products to competitors to Deutsche Telekom and France Telecom.

The UK telecommunications market is already the most liberalised in the world. Equipment manufacturers are widening their vision beyond BT and Mercury Communications, and are facing immense pressure from both the new operators and the incumbents to develop new technology that gives them a competitive edge.

New international and long-distance telephone networks are being built, wireless technology is being trialled for local telephone networks, and cable television operators are being allowed to offer telephone services.

The requirements of big business users are setting the agenda for equipment vendors. Coping with massive flows of data between sites has become a headache for today's telecommunications manager.

A surge in demand for the interconnection of local computer-based networks has led to the development of a fast packet-switching service for data communications called frame relay.

Equipment vendors are facing stiff competition in frame

relay from smaller companies in the computer and networking sectors such as Cisco Systems, Raycom Systems and StrataCom.

A bigger battle is being fought for dominance in Asynchronous Transfer Mode (ATM), a technique for sharing the capacity of a telecoms

channel between those wishing to use it. ATM enables telephone operators to offer high bandwidth services, such as high-speed data or video-conferencing, with improved efficiency and greater flexibility.

ATM is already being touted as the backbone for multimedia and other broadband ser-

vices, and can be applied to both private and public networks. All leading equipment vendors are positioning themselves for a share of the ATM market. A group of 16 European operators in 15 countries is to conduct an ATM trial this year, and all have awarded ATM contracts.

Familiar names such as Alcatel, Siemens, American Telephone and Telegraph and Ericsson have won contracts along with Natcom, a UK-based data switch manufacturer.

Ericsson has prospered as a leading telecommunications equipment manufacturer in a market which is undergoing rapid technological change and where a number of its rivals are stumbling. Alcatel, Siemens and Northern Telecom all suffered profit setbacks in 1993.

They were hit by a fall in orders for public telecommunications equipment as a result of the recession in North America and Europe. Meanwhile, products based on ATM, and Synchronous Digital Hierarchy, its sister transmission technology, are only now

emerging from the laboratory and operators are reluctant to commit themselves to major orders.

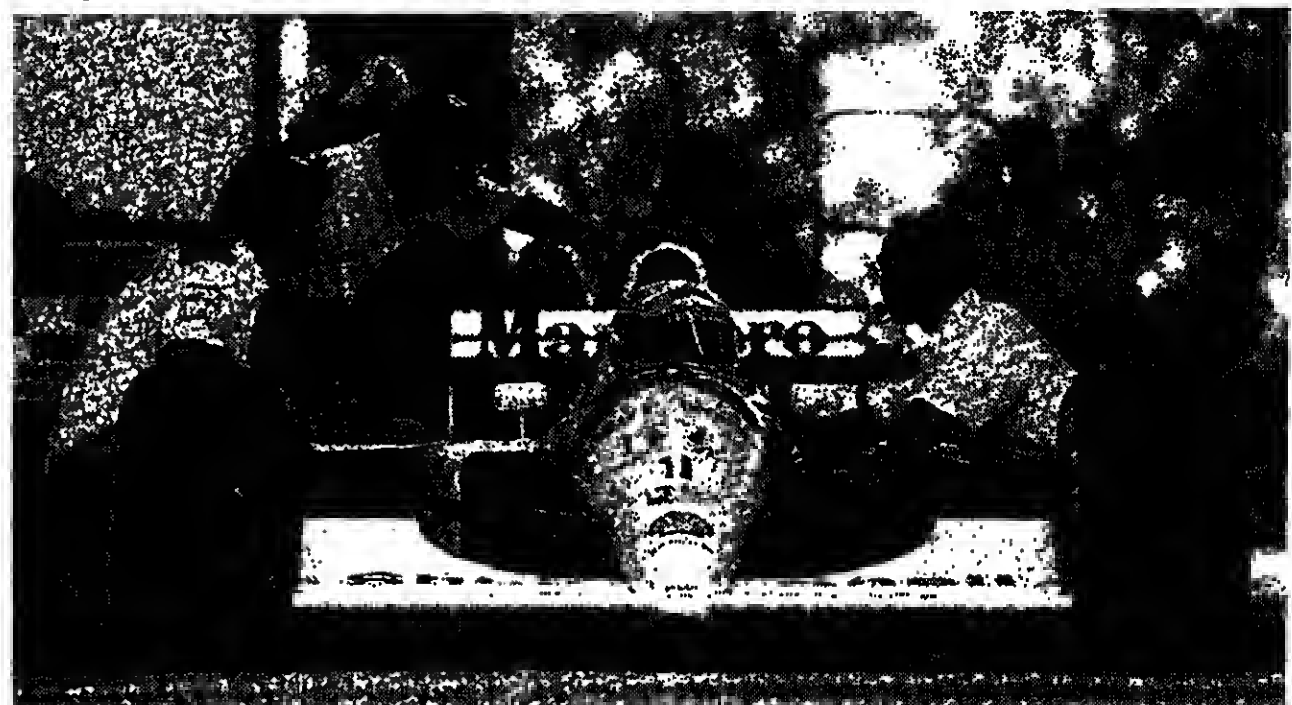
Lars Ramqvist, Ericsson's managing director, puts his company's strong financial performance in 1993 down to a strategy which meant spending 15 times more on R&D than on dividends.

In a speech at the 1994 Innovation Lecture in London last month, Ramqvist said manufacturers needed to forego short-term profit in favour of higher R&D spending.

Ian Macleod at Natwest Seller is confident that the combination of liberalisation and new technologies "promises a new phase of growth in the world telecommunications equipment market."

Leading equipment vendors are best-placed to benefit from the growth. But they will have to get the balance right between selling old products into new markets, and bringing out new products for their older customers in Europe and North America.

Mark Newman



Fast track mobile communications: when a McLaren Formula 1 driver needs to call in for a fresh set of tyres, he simply presses a button on his steering wheel. This allows him to talk to ground crews and pit mechanics over a sophisticated radio system, installed by the Kenwood Corporation for the McLaren team. Hands-free operation is ensured by a miniature microphone and speaker in the driver's helmet.

GLOBAL MOBILE COMMUNICATIONS

Watchword for the future

Paul Quigley charts the rapid progress towards a mobile millenium in communications

"Mind the gap!" warns a familiar, faceless voice to travellers on the London Underground. This could well be the watchword for the future of global mobile communications as a radical revolution takes place. The "gap" in this case is "globalisation and personalisation" - the main themes of the wireless age.

Few of us could have predicted the all-pervasive influence which personal computers would come to have in business and personal life over the last decade. Yet we are seeing the integration of voice, data, image, and communications in a natural evolution towards the multimedia workstation.

Similarly, emerging technologies in mobile communications have catapulted wireless, mobile and personal communications into one of the fastest growing markets in the world. The range of technologies becoming available is immense. Many people know about and use cellular telephones and radiopagers. Others are aware of mobile data and digital cordless technologies. Plans are well under way for future wireless and mobile communications systems which will obfuscate the demarcation lines between wireless and fixed telecommunications.

First generation cellular technologies - those in use today - are predominantly analogue systems such as AMPS (American Mobile Phone System), TACS (Total Access Communication System) and NMT (Nordic Mobile Telephone) systems.

Radiopaging has been dominated by the POCAG (Post Office Code Standards Advisory Group) system. Second generation mobile technologies are now becoming commercially available, introducing digital architectures to mobile communications. These include GSM, CT2, DECT, CDMA and the lesser-known IS-54 and PDC.

The speed of developments in the mobile industry accelerates apace. For example, it took cellular phone manufac-

turers eight hours to make a cellular phone in 1988; 30 minutes in 1992. Today it takes a mere 12 minutes - and this is a telephone containing computer capacity of between 30m and 40m instructions per second, equivalent to the power of mainframes of only a few years ago.

GSM (Global System for Mobile Communications) is in the limelight around the world. Developed by the European Telecommunications Standards Institute (ETSI), the technical standards body, GSM is the first harmonised European standard to catch the imagination and the investment of users, operators, and manufacturers alike.

GSM was developed as a pan-European digital cellular radio network architecture; it has evolved over more than 10 years into the standard we see today. Set to grow at an unprecedented rate over the next five years, GSM is already far more than merely a European standard. Already it has been adopted as the preferred choice of international mobile network operators in countries as diverse as Australia, New Zealand, Russia, South Africa, Hong Kong, China, India, Pakistan, and the Gulf states.

A report entitled "GSM - Going Global", by consultancy Nexus Market Analysis, forecasts that there will be 40m GSM users by the year 2002 in Europe alone. Driven by falling handset prices, competitive tariffs and wider network coverage, the market is growing at a phenomenal rate. The international roaming capability of GSM, coupled with the phase two supplementary service

enhancements such as data communications and fax, is making GSM a serious contender as the benchmark for future global mobile systems.

DCS1800, a digital cellular standard based on the GSM specification for lower power handsets, points to the future in the wireless market. Operating in the 1.8 GHz band width, DCS1800 is intended for use as a mass market personal communications network, or PCN. With a design philosophy quite distinct from its forbear, the key to the PCN market will be simplicity and ease of use. The target market for the "personal communicator" is you and me.

In the UK there are two



Celnet Lifetime, the mobile phone service package from Celnet, aims to make mobile phones affordable for domestic users.

licensed PCN operators. Germany has licensed one DCS1800 operator so has Thailand. France is in the process of licensing a DCS1800 operator and others are sure to follow. There is growing speculation that US telecom regulators will grant Personal Communications Services (PCS) licences to operators touting DCS at 1800 MHz.

Cordless technologies such as CT2 (second generation digital cordless telephony) and DECT (Digital European Cordless Telecommunications) are also reviving the industry. CT2 has recently experienced mixed fortunes around the world. The failure of CT2 as a public telepoint technology in the UK made many people think it was a dead-duck digital technology. However, mass uptake of CT2 in Hong Kong, France and elsewhere has forced a re-evaluation of its future. (The advent of the DECT standard may have somewhat dampened this,

as DECT has found converts in the cordless FAX arena, the wireless local area network (WLAN) market and even in the wireless loop market.)

In radiopaging, development in memory capacity, functionality and coverage are vying to re-establish this older statesman of mobile communications as a flexible and feature-rich medium.

"Wireless Messaging" is the term used by many people in the industry for radiopaging. ERMES (European Radio Messaging), the ETSI standard for digital paging, is taking longer than expected to launch. Third generation systems are already on the drawing board, with concepts such as "Future Public Land Mobile Telecommunications System" (FPLMTS), "Universal Mobile Telecommunications System" (UMTS) and "Universal Personal Telecommunications" (UPT) already well under development.

The backbone of these third generation systems will be Intelligent Networks (INs) which will enable users to rely on the intelligence in the digital network to handle the mechanics and logistics of routing, storing and forwarding of data.

Competition in Europe and across the world has driven the market - competition not only in handsets and equipment manufacture, but especially between network operators. At a recent IBC conference on Pan-European Digital Cellular Radio in Athens, GSM was seen as the de facto global standard.

Yet, despite GSM's runaway international success, there is a continuing debate within the industry over the future air interface of digital cellular systems. GSM, DCS1800, DECT, and others use TDMA (Time Division Multiple Access), which breaks up speech channels into multiple time slots. Over the last few years the industry has been rocked by an alternative digital air interface: CDMA (Code Division Multiple Access), a spread-spectrum technology making better use of available frequencies.

As we hurtle headlong towards a new mobile millennium, a blurring of the edges in place-to-place and person-to-person communications will give rise to wholesale change. We're going global in a wireless world. Mind the gap! Stand clear of the doors, please!

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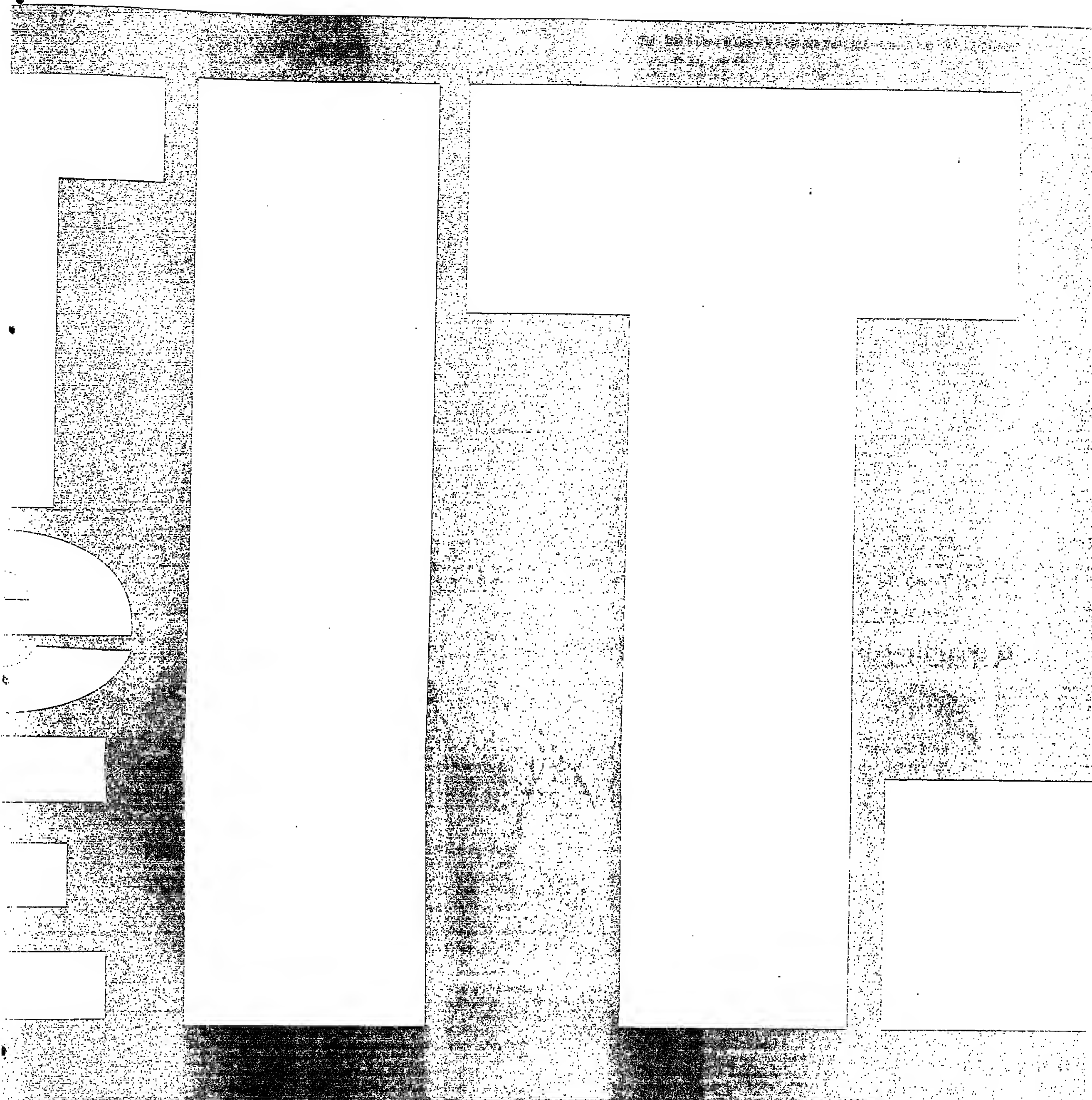
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Global Information Solutions

Information and communications technology 12

FACILITIES MANAGEMENT

A make-or-break factor

The ability of a company to operate – or not – may depend on the management of its computer system. This can be the 'make-or-break' factor, especially as computers move close to the centre of business in areas such as manufacturing, customer service and sales, as well as the traditional accounting functions.

On this premise both factions of facilities management (FM) base their arguments. The faction "against" believes the computer system is so vital to the competitive strength of core activities that it would be madness to contract it out. Inside knowledge – expertise about computing and the business – should stay that way.

The argument about being in the centre of things hands equal ammunition to those who promote FM. In a culture where compulsory competitive tendering (CCT) is the norm, there are economies of scale in an outside (or "outsourced") supplier providing the hardware, the software, and the expertise to support it.

CCT demands that every contract decision must involve those classic elements, "measure and deliver" – dear to the heart of IT professionals. You can't deliver what you can't measure. Furthermore, FM proponents argue that they are much better at knowing how much things should cost, where economies can be made, and delivering them, undisturbed by the fluctuating concerns of core operations.

Coding, programming and the support of end users are the central activities of an IT department. The argument runs thus: how much better for

In the term "computer services," emphasis is shifting away from computers and towards services. That is one reason why companies once dedicated to hardware or software are moving into facilities management, explains Claire Gooding



In-house IT staff are faced with increasing complexity of PC networks

individuals to be at the profit making centre of a company whose business is supplying IT services, than to be at the periphery of a company whose real *raison d'être* is making biscuits, making cars, or exploring for oil.

It has to be said, on both sides, that the margins in supplying computer hardware and even packaged software have dwindled. However, the long-accepted figure of "80 per cent of IT spending is on support and maintenance" stays constant. The bedrock of arguing about who owns a problem (software, hardware, network?) has driven many a user-company into single-source-supplier agreements, and the idea of contracting out an entire IT department is simply a logical step further in cost control.

The result is a burgeoning market in "systems integra-

tion" and "facilities management" – new names for bundling activities, familiar since the earliest days of computer services.

Systems integration is a broad church. It covers anything to do with development – including every sort of alliance of software and hardware involved in setting up new systems. FM is the contracting out of an entire task and its maintenance – the contractors take over the assets and the manpower necessary to the service.

The research company Dataquest estimates the value of the FM marketplace at more than \$2,500m in Europe, growing by 20 per cent a year. This explains why some of the best-known names in the computer industry are now turning to FM as a core activity. They include the big, tradi-

tional firms of accountants such as Andersen Consulting and Ernst and Young, and names once identified with manufacturing, rather than merely supporting computers. Unisys and Olivetti, for example, are among the companies which, once known for their proprietary hardware, have turned to supplying services and support for almost any sort of hardware and software, particularly the workstations and PCs termed "desktop services".

Nearly 1,000 of Olivetti UK's 1,400 employees are in the Customer Support Group, working for a customer base largely in the financial and retail sector. Unisys has recently signed up Bass Taverns, the UK's largest public house retailer, for an FM contract worth over £3.9m over three years. Its job is to support 2,500 pubs, developing and supporting Bass's Central Retail System.

In the UK, other users of Unisys' outsourcing services include McDonald's Restaurants. US users include the federal government, the Ford Motor Company, and Nasa.

Hoskyns is an active FM company, one of the UK's largest computer services companies, worth £200m, part of the French-owned Cap Gemini Sogefi Group. UK customers include Woolworths, Bristol Water, and Hoover – "outsourcing is still the fastest-growing sector of the IT services market. Analysts estimate that the European market will double by 1998 to a value of \$4bn," says Peter Falconer, Hoskyns' associate director.

Falconer is looking to the European market to expand. Five recent contracts for Hos-



Ready for action in an emergency, pictured here at London Docklands are the advanced financial trading positions in the Telephone purpose-built data centre, ready for companies needing disaster recovery services. The £20m centre – an Anglo-Japanese joint venture – is located three miles from the City of London's financial district, in a 24-hour operation with satellite communication services.

lyn's Scandinavian sister company, adding up to £17m worth in all, underline the ambition. "The pace at which FM is adopted will differ country by country," he says. "COS is well placed to benefit from this expansion, because it is committed to regional as well as global service delivery."

He argues that in-house IT departments find it difficult to keep pace with the growing demands of the organisations they serve, and the increasing complexity of PCs and LANs is putting more strain on them.

Sharing the benefits of cost-saving is a convincing argument for FM, but there is always concern about staff who have to change allegiance to the "outsourced" supplier. (See panel on Andersen's BP contract for an example). There are regulations to protect them: the Transfer of Undertakings (Protection of Employment) Regulations 1981 retain current terms and conditions for staff being transferred.

The government is anxious to remove obstacles to free market testing. According to the William Waldegrave, the minister for public service and science, speaking at a recent Financial Times conference on

resource management, "The relevant provisions of the Derogation and Contracting-Out Bill, now before Parliament, are designed to extend the scope for market testing activities in central and local government by removing obstacles to the contracting-out of statutory functions." This is good news for Athesa and others – but staff affected might not be so pleased.

Unison, the UK's biggest trade union, and CMS, a division of British Steel, claimed to have broken new ground when they recently signed a trade union agreement which outlined practices and procedures to be followed when staff transferred from Cambridge City Council to CMS, a division of British Steel, which won the multi-million pound contract in late 1993. According to Mark Pope, CMS sales and marketing manager, this was an important "industry first".

"We believe it is important that our new staff have confidence in us, and we in them." The Unison office at Cambridge City Council stressed the importance of contractors recognising unions. "If we are to be subject to the contracting out of services from local authorities, then it is important that any successful contractor recognises unions: CMS was the only candidate that had any track record of successful relationships with Unions."

This is a hint that the change of culture associated with working for one organisation rather than another might bring new patterns to the computer industry. "Partnership" – the key word emphasised by all FM suppliers – means both partners making allowances if the marriage is to last. take in Bull and Andersen stories

Case study: two companies break new ground

A radical change in culture

Facilities management agreement between BP Exploration Europe (BPXEU) in Aberdeen, and Andersen Consulting, broke new ground for both companies. In effect, BPXEU outsourced not only the IT department and the accounting software it had used, but the actual accounting function and staff as well.

The decision, taken in the early 1990s, affected the entire accounting services of the UK and the Continental Shelf operations – a £12bn business worldwide, employing some 7,000 people. Another unusual aspect was the extreme secrecy of the arrangements: the 300 accounting staff affected were not told until after months of negotiations and hammering out details of the facilities management (FM) contract.

The driving force for BP Exploration towards facilities management was the need to cut down all expenses by 30 per cent. Tom Wright, control and planning manager at BPXEU, explains the pressures brought about by the collapse of oil prices since the early 1980s – "we realised we would have to radically alter



Bill Lattimer: "We have taken a process and completely redefined the way the service operates."

the way we did business to remain competitive. We had to reduce costs 30 per cent across the board," he says. "It was a requirement for every manager to achieve that within three years without compromising health and safety."

The core skill for BPXEU was its business of oil exploration, and a hard look at the accounting services revealed that a line could be drawn

between what accounting information was truly necessary in-house, and what was not.

"It is vital that we have that information, for making policy and interpreting business information, but not that we provide it ourselves," says Mr Wright.

"Similar styles" is the reason he gives for the choice of Andersen Consulting – "we already had a track record at BPXEU. When news of the announcement broke in June, it was a brand new idea for both companies. Andersen was to take over accounting staff as well as IT staff and computer assets."

"Initially there was shock, even anger. However we had prepared pre-planned, individual, intensive counselling sessions, and by the end of the day, people understood the offer it was going to have. We thought that was better than moods of uncertainty," says Wright.

The business was transferred under transfer of undertaking legislation, which protects the employees and their rights. Effectively they had no choice, although for some, the centralisation of operations in Aberdeen, from the six sites previously involved, pre-determined the decision.

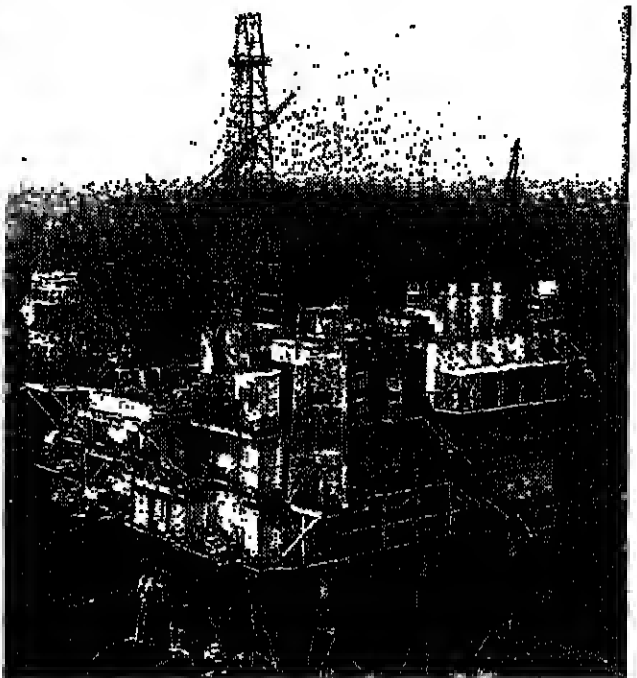
"Everyone outside Aberdeen had a choice of relocation to new location or accepting severance terms," says Tom Wright. "They were transferred – full stop. There was no choice."

Andersen took over the staff, the Vax computer and McCormack and Dodge (now Dun & Bradstreet) Millennium software used for the accounts. Wright himself has no doubts that the deal arranged for BPXEU accounting staff actually secured better career prospects and long-term employment.

"Andersen Consulting provides greater focus and incentive for the staff who feel far closer to the business. If an accountant works for an accountancy company, it is the focus of using the core skills in the core business that drives the difference. No one believes that on 'day one', of course, but after six or seven months that is exactly what has happened."

The pension rights were the only thing that had to be addressed – in some cases "topped up" to match the BP scheme for those transferring to the Andersen pension scheme.

"The key benefits are the enthusiasm and the focus of the staff. It has reduced costs by creating a single interface, instead of a myriad of interfaces," says Mr Wright. "The real effect is that we have turned a fixed cost to a variable, or at least semi-variable cost. As the service expands – say, drilling increases or new fields come online, or we dispose of other assets – so the cost varies. Now we can con-



BP Exploration's incentive for FM was the need to cut all costs by 30 per cent. Pictured below is the central control room on an offshore platform



centrate on the core business, and it allows us to focus on the business of exploration and production. It has simplified things. We don't have to worry about training, developing and motivating 300 accounting and support staff."

However, there has been no abdication of decision-making. "We take all the business decisions. They provide the financial analysis and variants analysis, but they don't decide what should be done: the decision-making is the core skill," says Mr Wright. He believes the physical distance of the Andersen operation, five miles away, was essential to bring about a change of culture.

The initial contract is for four years: both parties reckon on three years to get the costs down, although a longer partnership is envisaged.

"It's an opportunity to share benefits: if Andersen can grow the business, they can bring the cost down. They have the focus to do it faster and more efficiently. The other thing I emphasise is that we really did want the best for our staff. We honestly believed they would have a better future than in a business where the cost pressures of the North Sea were a constant threat," he adds.

The FM contract has had one more important psychological effect, he says. "More than anything else, the move convinced everybody else inside

Starting a facilities management company might seem a radical departure for Bull Information Systems, but when Athesa, its new facilities management (FM) division, was launched in February, Philip Crawford, the chief executive, insisted that the new company was no departure but a logical evolution from the role that Bull has long held with its customers, writes Claire Gooding.

Mr Crawford sees FM as an international opportunity – "the use of partners to offer a full range of services in the outsourcing arena will be a growing trend. We can draw on facilities in 23 countries," he says.

The company is experienced in changing its role as the computer industry has evolved. Its primary markets – healthcare, police and local government – are among those most drastically affected by the demands of cost-cutting and compulsory competitive tendering.

According to Athesa director, Brian Gunn, the move is customer-driven – "we are focusing to deliver a range of services, from under one roof. In the last 12 months customers, especially in local government, have been asking, 'what are we doing in FM?'"

Bull has used partnerships of various sorts as the platform for its own sundry changes of direction. As part of its adjustment to Open Systems, it has developed strong links with software vendors and value-added resellers. In the past Bull has done well as the prime bidder in single-source contracts, with clients who are comfortable with the 'one bottom to kick' principle.

The key to success, he believes, is flexibility in the use of staff. There is a core of 80 Athesa staff in the division, but he intends to treat the rest of Bull as on call. At one client, Glaxo, Athesa is providing a desktop service where it is installing, maintaining and supporting PCs, LANs, and Unix servers, not only in the UK, but in 26 countries worldwide. The contract has been worth £2.4m since it began in 1992, and is expected to be renewed at the end of its current period in 1994.

"We can bring our skills to the fore in forging new partnerships. There is a range of skills and complementary

Leading facilities management suppliers*			
Supplier	UK %	Europe %	World %
EDS-Scicon	12	12	12
Sema Group	11	4	4
AT&T	9	3	3
Data Sciences	8	3	3
CFM	5	2	2
Andersen Consulting	4	-	-
DEC	3	2	2
Trinet	2	-	-
PEP	2	-	-

*Figures for 1993
Source: Input Research Group

Facilities management: the supplier's viewpoint

Customer-driven approach



The key to success in facilities management is flexibility in the use of staff, says Brian Gunn, director of Athesa UK – "we can bring our skills to the fore in forging new partnerships," he adds

expertise we can draw on. Perhaps those skills are unique in themselves, but what is unusual is that we can pull it all together," says Gunn.

Development and systems integration are complementary to Athesa's plans. Bull's Systems Integration section will provide the experts who are needed on projects needed, for any period from a week to two or three years. Athesa will provide the long-term support for operations and applications support, and management of IT. Bull's plans are standard in this area, involving the takeover of staff and assets. "We have the resources on tap, they get the career opportunities," says Mr Gunn.

Athesa's sister company, the People Plus head-hunters, are part of the partnership. In one sense, Gunn argues, the source of supply is the cornerstone of

the business. There has always been a division in programming between those who develop and those who maintain software.

While this distinction has been largely broken down by the increased use of software packages, and the availability of fourth generation languages, there will be times when the aristocrats of development will be needed on a short-term basis.

In concentrating on the desktop delivery, Bull is not alone. Desktop and the network have become more important. Supporting legacy systems is bread and butter, but the market is heading towards improving, not merely maintaining operations.

"It is in the area of business operations that the opportunities of cost-benefits are to be achieved," comments Mr Gunn.

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BUSINESS SOFTWARE CHALLENGE '90s

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Once again, the UK's young software designers have the opportunity to win cash, software and software prizes to the value of £20,000 in the Business Software Challenge '90s design competition, just launched – for its fourth year.

The competition is a way of recognising and rewarding student designers as well as demonstrating to the business community the high quality of software design talent in the UK.

The competition is sponsored by Computer Associates, one of the world's leading software companies. Others giving support are FT's regular review of business software, Software At Work; the British Computer Society; the Institute of Management; Coopers & Lybrand; the Worshipful Company of Information Technologists and the Conference of Professors and Heads of Computing.

Success for previous winners

Last year's competition attracted record entry levels. Both the winner of the "Overall Winner" category (Andrew Walker, University of Nottingham) and the winner of the "Best Business Solution" category (Richard Maher, Brunel University) are now turning their designs into commercial products with the help of competition prizes.

During its first three years, the competition has awarded prizes to designs ranging from a small hotel management system and a sea-bed profiler to a system for assisting medical departments in the care of patients with heart problems.

The competition is aimed at students in higher education and recent graduates, working individually or in teams. It challenges them to submit original software designs – usually developed as course work – which address specific business problems. Designs should run on commonly available computers and integrate with other relevant software.

The closing date for receipt of entries is September 2, 1994. Prize-winners are offered help in taking their products to the marketplace.

For more information and an explanatory booklet, apply to:

The Competition Secretary
Business Software Challenge '90s
PO Box 2 ER
London W1A 2ER
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THE UK'S COMPUTING INDUSTRY

History often repeats itself

The development of the UK's computer manufacturing industry ran into problems from the start. Genius was let down by poor marketing and lack of government funding, writes John Kavanagh

Fujitsu's takeover of ICL in 1990 brought an end to a UK-owned computer manufacturing industry which dated back almost 40 years.

Yet according to some of its early leaders, who met at London's Science Museum at the end of last month to discuss why the early UK promise was not fulfilled, the fact that the industry had survived even beyond the 1960s was quite remarkable.

The packed meeting, organised by the Computer Conservation Society, highlighted the UK's disadvantages from the very early days.

"The UK's contribution was out of all proportion to its population and industrial capacity," said Mr George Davis, who worked at the National Physical Laboratory on the ACE (Automatic Computing Engine).

"This was true at all stages: the creation of basic concepts, the research and development leading to the first computers and the emergence of a computer industry with competing suppliers."

But Mr Davis argued that the breadth of this contribution meant that the UK industry was too diverse from the start.

By the mid-1950s there were eight computer manufacturers. They included Ferranti, English Electric, ICT (International Computers and Tabulators), Elliott Brothers and Leo Computers - this last was the product of J. Lyons' extraordinary expansion from tea shops into building computers.

Lyons is credited with being the first organisation to run commercial applications. Notable among these were bakery production monitoring in 1951 and payroll in 1954. These landmarks inspired The Economist to publish a feature article in 1954 which asked: "Is this the first step in an accounting revolution or merely an interesting and expensive experiment?"

The trouble was that the US, with a similar number of manufacturers, had a far bigger home market on which to build the foundations for its industry - and more government support.

"While the US government was supporting research and development in the late 1940s and early 1950s, with guaranteed orders at the end, the

computer industry was not seen as significant in the UK and was not supported," George Davis told the Computer Conservation Society.

This was underlined by the practical experiences of Mr Cecil Marks, who recalled being seconded by Royal Ordnance, where he worked on administration and accounting, using punched card equipment, to a study carried out by government departments into the potential uses of computers. Scientists and users from several departments, including the Treasury, worked for 18 months, culminating in the production of a hefty report and a meeting with "a very senior civil servant."

"At the end of the meeting he suggested that this was not the time to be getting into computers," Mr Marks said. "That led to the Ordnance factories, at least, losing ground for more than 10 years."

Other factors were brought to light by Mr Hugh Ross, who set up Ferranti's London computer centre in the mid-1950s. He pointed to a dispute between Ferranti and the National Research Development Corporation, over manufacturing costs underwritten by the publicly-funded corporation, which led to a nine-month ban on sales. As Mr Ross said, this had a "crippling" impact on UK success in the emerging market, as well as hitting Ferranti's cash flow.

But Mr Ross also blamed an absence of financial management for Ferranti's failure to fulfil its early promise. Even when he set up the London computer centre, he said, he never had to account for any money he spent - indeed, he had never had a budget in the first place.

Later, when he was responsible for Ferranti's pioneering documentation service, one of the biggest spending units, Mr Ross again had no budget. Moreover, he had never had to produce a business plan and was never called to account. "There was no financial management at all," he said.

"I later joined STC and came in contact with management training provided by its owner, the US TTT group," Mr Ross added. "This was terrific - and

a profound shock, after Ferranti. We had to produce business plans, prepare budgets and report our monthly results against those budgets."

Such personal reminiscences add flesh to historians' reports on UK genius being let down by everything from poor marketing to lack of government funding, compared with the US, France and Germany.

Whatever the combination of factors, George Davis showed how US manufacturers took firm control within a dozen years of J. Lyons running that first payroll system.

By 1967, IBM had installed over 21,500 computers of various sizes; UK market leader ICT (soon to become ICL) had sold 844. These included 399 of the new 1900 range (which was to be the company's mainstay until the middle of the 1970s); meanwhile, IBM's System 360, launched the same year, was already up to 5,730 installations.

In 1968, ICL was formed as the great white hope: the culmination of merging the com-

puting activities of all the early manufacturers. Yet it was still dwarfed by IBM: George Davis showed that in 1969 ICL had a £115m turnover and spent £13m on research and development, while IBM had a turnover of £3,000m and a research budget of almost £170m.

However, a retired ICL executive director, Mr Peter Hall, stoutly defended ICL's record. ICL and its ICT forerunner had been profitable for 35 years - apart from in 1965, just after taking over Ferranti's ailing computing operation; and in 1981, when the visionary Dr Robb Wilnot was transforming the company for the emerging office computing revolution.

Mr Hall said Fujitsu allowed ICL to run itself, and that the company generated all its own cash for takeovers and other investment, and did all its own design work.

Whether that makes ICL any more British than IBM UK (or Rover Group in the car industry, for that matter) is debatable. But Mr Hall argued that these points suggest that the early promise of the UK com-

puter manufacturing industry, which had mostly merged into ICL by 1969, was fulfilled after all. It is simply that a generation later the industry is all in foreign hands.

As today's tight margins on hardware increasingly cause computer manufacturers to look to software and services for their profits, it is equally debatable whether the virtual disappearance of a UK computer manufacturing industry need be a cause for concern.

That concern is now focused more on the software industry, where some big names have fallen into foreign ownership. Takeovers of Cap, Hoskyns, Istel, Scicon and others have given substantial footholds in the UK market to, for example, the telecoms giant AT&T, General Motors' EDS subsidiary and the French company CGS, Europe's biggest computing services group.

History, as they say, has a habit of repeating itself.

The Computer Conservation Society has regular meetings and works on restoring ancient computers. It is also opening Bleichley Park (which cracked German codes in the Second World War) for public visits. The secretary is Tony Sale, (0294) 822783.



Computing 40 years ago: IBM's famous 705 valve computer. By 1967, IBM had installed over 21,500 computers of various sizes; UK market leader ICT (soon to become ICL) had sold 844. These included 399 of the new 1900 range (which was to be the company's mainstay until the middle of the 1970s); meanwhile, IBM's System 360, launched the same year, was already up to 5,730 installations.

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SHOWS THE WAY

SYSTEMS INTEGRATION

An expensive option for the foreseeable future

Like many computer terms, systems integration is hard to define. At one level, any computer-based information system must be integrated or it will not work. But the term has come to refer to a particular class of computer system – that is, one which is assembled from a set of components in a way which hides the technology from the customer.

The importance of systems integration as a discipline has grown steadily since companies began the move towards open systems. A system does not, of course, need to be "open" to require integration – but this is where the largest demand is.

Proprietary systems are also "integrated" – but most of the integration is performed by the manufacturer and the system

The perceived demand for systems integration has attracted a growing number of supplier and services companies

is sold as a complete solution. Open systems bring the advantages of user choice and flexibility – but there is a price to pay. They are constructed from hardware and software "components" which are usually sourced from several different manufacturers. They will almost certainly involve the use of a technological design framework which separates systems functions into users and services. This approach is usually referred to nowadays as client-server computing.

Advanced skills are a prerequisite to bring these components together to create coherent and useful applications.

Systems integrators must have a wide knowledge of "componentry" and how it may be brought together successfully.

They must also have strong software development skills because integrated systems invariably require some "custom-built" components to meet the application need.

The perceived demand for systems integration has attracted a growing number of supplier and services companies in the past two or three years.

Established hardware manufacturers in particular have seen systems integration as a growth area as margins on hardware have fallen. IBM,

DEC, Groupe Bull, ICL and Unisys have emphasised their systems integration talents in recent years and their service revenues have grown accordingly.

They are not the only contenders. Large consultancy companies such as EDS, Andersen Consulting and KPMG have also made a large dent in the market as indeed have traditional custom software developers such as Logica, SEMA and CCS.

Successful systems integration depends on a broad foundation of standards for both hardware connections and software compatibility.

Some standards are drawn from formal efforts by international standards bodies such as the International Standards Organisation (ISO) and the American National Standards Institute (ANSI).

But many of the standards which make integrated systems possible have evolved from proprietary industry standards such as IBM's SQL database standard, which is used to link desktop data tools to database servers.

Given the importance of open systems standards, it is no surprise that the lead in systems integration has come from the public sector.

The procurement policies of government departments have pushed the cause of open systems and put many of them in the front line.

"The UK government's decision to force open systems by legislation has been good for the systems integration market," says Mr Philip Crawford,



The investment bank, Barclays de Zoete Wedd (BZW), one of the City of London's leading equity dealers, has switched over to a new multi-million pound share settlement system, called Aries. Developed and installed by Syntegra, the systems integration business of BT, the new system will handle all BZW's UK and international equity settlements with greater speed and accuracy. Aries handles up to 22,000 trades each day.

UK managing director of Groupe Bull.

He goes on to say that there are other reasons why the demand for systems integration has grown faster in the government sector than in the commercial sector.

"For the last two years companies have been holding off making large investment decisions because of the recession – and obviously the recession hits commercial world much more than it hits the government sector."

Mr Crawford adds that this has depressed the market – but that there are signs that this is starting to change.

"The market has probably grown at around 15 per cent – when two years ago we expected it to be more like 40 per cent. But it is now being driven by the user. The demand for systems integration is coming from the user

because they are crying out for usable power."

This demand is manifested in the demand to integrate desktop PCs into existing systems. The PC is obviously the best way to deliver usable power to the desktop.

Mr Crawford warns, however, that there are dangers:

"The PC is two different tools. If you think of it like a car – it is excellent for driving around town but it is also pretty good on the motorway. Good systems integration makes sure that the corporate strategy – the motorway – does not overwhelm the desktop," he explains.

Groupe Bull's systems integration strategy, like many others, is based on developing the right combination of technical skills and relating these to business problems.

It also sees the wisdom of securing alliances with other

important players in the market and recently signed an agreement with software developer Microsoft to integrate PC software with its own larger systems.

"This is more than a marketing agreement. We have had to work hard to prove to Microsoft that we have the integration skills and the support services to do the job," says Mr Crawford.

The deal will give Groupe Bull advanced access to important Microsoft developments such as the Windows NT operating system, which looks set to be a leading component in future client-server systems.

This level of software is increasingly important to the success of systems integration as indeed is the move to object-oriented computing, which will help to enforce standards for

software components.

Despite this, systems integration will never be easy – especially as the number of choices open to users increases.

"Users have developed an attitude which means that they expect information technology to support them – whereas a few years ago they had to put up with what they were given. But because of openness, there are far more decisions to make now and it is certainly not getting any the less complex," observes Mr Crawford.

Systems integrators are, therefore, in the unenviable position of having to keep up with every new technology development at the same time as meeting the growing demands of increasingly educated users.

For this reason, systems integration is likely to remain an expensive option for the foreseeable future.



The importance of systems integration has grown steadily since companies began the move towards open systems. Integration will never be easy – especially as the number of choices for users increases.

Matching invoices to orders and goods-received documents tends not to be a favourite job or a high priority for business people, writes John Kavanagh.

British Gas North Eastern, which has six districts and a Leeds headquarters receiving 200,000 invoices a year from 8,000 suppliers, has automated the paper chase with document image processing and has reaped considerable benefit.

Paper movement has been drastically reduced, people holding up the process have been pinpointed and cash flow has improved.

The paper chase used to involve an order document going to a supplier and a copy being signed off as the goods-received note when the items arrived. Invoices were sent to the finance department in Leeds, which passed them to the relevant districts to be matched against the goods-re-

ceived notes. These notes and the invoices were then returned to Leeds for the details to be keyed into the system. The documents were finally recorded on microfilm.

Mrs Christine Kelly, invoice supervisor, recalls: "There was paper flying about everywhere."

The invoice unit installed software from Image Systems Europe on its existing office network of ICL personal computers and Novell network software, which was already used for basic office automation such as word processing and spreadsheet processing.

The PCs were fitted with large screens to display full

images of documents and two Fujitsu scanners and three Sony optical disc systems were added, all supplied by Image Systems Europe. One of the optical disc drives is reserved for copying each day's work, for back-up.

Goods-received notes and invoices are all scanned in as they are received from districts and suppliers. The order number is keyed in and stored with each document as the main reference point: an order number includes a code representing the district which made the order.

The amounts on the invoice are also keyed in and put through a validation program to ensure, for example, that the

figures add up and that the VAT has been calculated correctly.

This information has to be keyed in because document scanning systems handle complete images and cannot recognise individual parts of different documents to capture an address or total figure.

When the system receives an invoice it uses the order number to search for a matching goods-received note. If it does not find one it automatically directs a query to the relevant district office where staff can access the central optical disc system through their own PCs.

Matched invoices are passed automatically to the payments system on the region's ICL

mainframe computer. The mainframe link is also used to retrieve information such as supplier details from central files.

The system has brought significant staff savings and enabled fewer people to deal with the same amount of work while providing better service. The paper chase has been largely eliminated and keyboard data entry and verification have been vastly reduced. Cash flow has improved because more suppliers are

paid on time. "We no longer pay them late – or early," says Christine Kelly. "Suppliers would phone to ask for payment and it was difficult to find the right bits of paper. We now have easy access to all the documents and can see if payment is due."

People's reluctance to check goods and sign goods-received notes was the biggest problem before but the system has got to grips with this. "It's fantastic in this area," Mrs Kelly says. "Before, we knew we had

queries but couldn't keep track of them. We now know exactly where queries are and can get people up to act on them. We can now be proactive rather than reactive."

Product: Image Systems Europe tailors each document image and work flow management system to the customer's needs. British Gas uses a version called ISE Accounts Payable, which can match order documents to invoices and link to accounts payable systems. A

fax facility is available. The system was launched in 1991. Number of users: six for ISE Accounts Payable; three British Gas regions, Tesco, Top Rank and Woking Borough Council. The company has 55 document and work flow management systems installed in the UK and Europe.

Supplier: Image Systems Europe, formed as a UK company in Sheffield in 1990. Turnover in 1993-94 was up by 48 per cent at £2.1m.

Price: £100,000-£150,000, including software, scanner and optical disc system but excluding PCs and networks. Hardware and operating systems: Novell networks, Unix computers and IBM-type PCs running OS/2.

Document image processing: two case studies

How automation cuts the invoice paper chase

A better way to manage contracts

A simple document image processing system installed by the pharmaceuticals company Medeva looks set for wider use following quick installation and enthusiastic reports from staff, writes John Kavanagh

Medeva, the UK pharmaceutical manufacturer, has installed Archis software from Belgian company Software to manage images of contracts, typically with other manufacturers, licensees and distributors.

Medeva has installed a network of five Apple Macintosh computers at its offices in Leatherhead, Surrey, partly to run Archis and partly to support office automation such as word processing, spreadsheet processing and links to the company's electronic mail system.

The entire stock of 930 agreements, running to 18,000 pages, has been entered and all new agreements are scanned in immediately.

The paper contracts have always been kept in fire-proof cabinets and a list was maintained through a simple database system based on the Dbase III product.

People working on particular agreements would consult the holder of the list, intellectual property co-ordinator Gail Beale, to see if there were any other relevant documents, and then hunt them out in the filing cabinets. All the documents are now on-line to all staff in the department.

"It could take hours to get through these steps and find files, especially if you wanted, say, all the agreements relating to a particular company," says Mr Peter Cozens, head of licensing and product acquisition.

"The files were just stored in chronological order. We can now search on many criteria, such as company name and therapeutic area, so we can easily find the history of agreements in a particular field."

"The system has improved the information we have available and our ability to respond to different situations."

It took Gail Beale three months to scan in all the documents and assign keywords to each one. She and Peter Cozens agree that the system is very easy to use. A "find" screen is presented when a user logs in and a search is generated by entering the keywords.

Access is being extended to the company secretary's office in London and the system has attracted the interest of other departments.

"We could turn out to be a pilot for the whole company in document image processing," says Gail Beale. "It's a very impressive system and I could see other parts of the company getting considerable benefits."

Software details: Archis, a document file management package combining document images, video and data and text files from other systems. The latest ver-

sion, 2.0, was launched in September 1993. Price: \$995. Supplier: Software, the Belgian developer, formed in 1988. The UK subsidiary was formed in Uxbridge, Middlesex, in 1992. It has 47 staff, including five in the UK. Turnover in 1993 was £1.5m. Number of users: more than 200, including more than 50 in the UK.

Hardware and operating systems: Apple Macintosh central processor; Macintosh workstations or IBM-type PCs running Windows.

Advances in the electronic office: see page 5

For details of forthcoming FT surveys relating to information technology, see details on page 12.

An in-depth review of office automation appeared in the latest issue of "Software At Work", the FT's review of business software, published on Thursday, March 10.



INCREDIBLE, BUT



HEALTH SERVICE INNOVATION: In a cost-saving move, Advent UK, the commercial division of Greenwich Healthcare in south-east London, is using a networked Xerox DocuTech digital document production system. Advent also sells its printing services to other trusts, thus making a profit for investment in new medical equipment for the health authority. The Xerox DocuTech system allows users to electronically send jobs for printing from various locations to local health authorities. Disks can also be accepted via disk or scanner.

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Tom Foremski highlights advances in personal digital assistants

Potentially large market in the longer term

Like so much pioneering technology, the first generation of these small devices has largely failed to meet user expectations - but a wave of improved products is on the horizon

Personal Digital Assistants (PDAs) and personal communicators represent the next big computer market, and for some industry observers, possibly the last of the potentially large market categories for computers.

These small computer devices represent the logical progression of computer technologies as they move from the desktop, to portable computers, to the lap-top and finally to the so-called palm-top. But like much pioneering technology, the first generation of these devices have so far failed to meet user expectations.

However, there are encouraging signs that the second generation of products will overcome some of the problems.

Apple Computer was the first to coin the term "PDA" which is rapidly turning into a generic name for small computers with communications capabilities. Tandy, which sells the Zoomer, sometimes uses the term "personal information assistant," while IBM and AT&T prefer the term "personal communicator."

They all describe a small

computer that can be comfortably held in the hand or slipped into a jacket pocket, with a touch-sensitive screen with a pen or stylus input device and wireless communications capabilities for sending and receiving electronic mail or faxes and transferring files to a desktop computer.

A typical PDA will include software that consists of a word processor, a diary for scheduling appointments, and a database to store information such as phone numbers and addresses.

The first PDAs to hit the market were the Apple Newton

MessagePad, Tandy's Zoomer and AT&T's Eo Communicator. Each has taken a slightly different approach but all are united by the fact that their sales have been far short of stellar.

The Newton MessagePad represents the most ambitious technology. It includes sophisticated handwriting recognition software that turns the "digital ink" that is written by the user with a special stylus, into computer text. While the handwriting recognition technology is state-of-the-art and works better than most previous

handwriting recognition technologies, its performance has not impressed most users. The handwriting recognition of the Newton fails to recognise many words, resulting in a sometimes comical re-interpretation of the user's words, as satirised recently in the *Doonbury* comic strip.

The Newton also has problems with foreign languages, especially German where average word lengths are 10 characters instead of the six characters average for English words. Newton has also been faulted for its communications links which do not perform as well as expected.

The Tandy Zoomer, also marketed as the Z-7000 by Casio, has avoided, to a large degree, the quagmire of handwriting recognition. It cannot recognise cursive writing but it does have a very limited ability to recognise printed characters. It prefers to store images of the user's notes instead of performing the difficult handwriting interpretation.

The AT&T Eo Personal Communicator packs more technology into its sleek box than Newton or Zoomer, but it is twice the price. Unlike the others, it includes a 20-megabyte hard drive that allows it to store much more information. But it suffers from a short battery life - about two hours - and you really need to

upgrade the machine's memory to use its fax and e-mail communications features.

All the leading PDAs have been criticised for being too slow and they all use different operating systems which makes it difficult to produce a decent number of software applications.

The Newton has its own proprietary operating system, the Zoomer uses the Geo software from GeoWorks, and the Eo device uses the PenPoint operating system.

This multiplicity of operating systems makes life difficult for software developers. They have to try to guess which device will sell enough units to create a large enough potential market to justify the expense of applications development. And without sufficient quantities of third-party software, the PDAs face a limited appeal.

Despite the initial problems that have beset the first-generation PDAs, the second generation devices promise improvements and new features that will make them more useable and hopefully will fulfil the large unit sales expectations of market researchers.

Apple, for example, is redesigning the Newton to add better communications capabilities, and an improved operating system. Handwriting recognition is also improved but, in what is an admission of a less-than-perfect system, the next Newton will have the option to store images of a user's notes without converting the handwriting to computer text.

AT&T, stung by the disappointing sales of the Eo Communicator, is redesigning the system, lowering the price and making it more of a mobile telephone with computer features.

Other leading computer companies are also planning PDA introductions. Compaq Com-

puter, Motorola, IBM, and Sony are just a few of the big companies that will introduce PDA-type devices later this year.

IBM's plans include a variety of PDAs designed for specific tasks, such as one model equipped with voice recognition for dictating documents and using a pen-input device for editing. Another IBM PDA is designed for e-mail communications, allowing users to hear messages spoken in a computer-generated voice and to dictate a response.

PDAs could benefit greatly from a standard user interface. General Magic, a Silicon Valley-based company, earlier this year unveiled its Magic Cap user interface which is specifically designed for PDA devices with communications capabilities. The Magic Cap interface features a tiny graphical user interface using a buildings metaphor. Users navigate through the systems to reach different applications by choosing different types of buildings such as a post office, for example, to send messages.

Magic Cap is designed to work with on-line services such as CompuServe or AmericaOnline and specialised on-line services that use the companion Telescript technology. Because of the small storage capabilities of PDAs, on-line services are becoming a key factor in the success of PDAs. They will offer data storage services to PDA customers and also carry e-mail and faxes.

AT&T recently announced its PersonalLink on-line service that will support PDAs, and Apple's eWorld on-line service will support Newton users.

It is said that you can always recognise the pioneers by the arrows in their backs and although the first generation of PDAs collected a fair number of arrows, it is only a matter of time before the next generations become ubiquitous and useful devices.



Apple's Newton MessagePad represents the most ambitious technology in the PDA field. It includes sophisticated handwriting recognition software that turns the "digital ink" that is written by the user with a special stylus, into computer text. While the handwriting recognition technology is state-of-the-art and works better than most previous handwriting recognition technologies, the performance of early models was criticised - but enhanced products are on the way.

Technology developments in Canada

The clear message: innovate or perish

Canada's successful IT companies demonstrate that to survive they must be show greater speed and originality than their US competitors, writes Geoff Wheelright

When you live next to a country as large as the US and want to succeed in the information technology sector, you have to innovate to survive.

That is the story behind Canada's best personal computer and telecommunications companies - which seem to win new business by creating specialised solutions for surprisingly common challenges.

Take the success of Canadian personal computer software maker Delrina, which hit the world markets in a big way with its WinFax software for Microsoft Windows, a few

years ago. Many companies had tried to produce software which allowed users to fax documents direct from their PC screens, but none had ever really achieved much success with it until this Canadian company came along.

By closely identifying a need for simple design, low cost and an ability to work with dozens of popular personal computer fax modems, Delrina almost created the market for Windows-based fax software. Today it dominates that market. It has been successful in building on the reputation of WinFax with a range of form-design products and fax add-on systems, and operates in a number of countries including a subsidiary operation in the UK.

Likewise, the Toronto-based Vivid Group identified at an early stage the potential of "virtual reality" technology. Using its implementation of this

idea, it started building entertainment and education systems.

Today, the company's Mandala System, an interactive virtual reality product, allows users to indulge in a variety of "virtual" experiences including virtual ice hockey (something guaranteed to make it a big hit in Canada), virtual volleyball or soccer, and even a virtual swim in the shark-infested waters of Australia's Great Barrier Reef. The Vivid Group recently won the ultimate accolade for its virtual reality technology when it was selected to provide a key element of Paramount Pictures' Virtual Star Trek Transporter Experience.

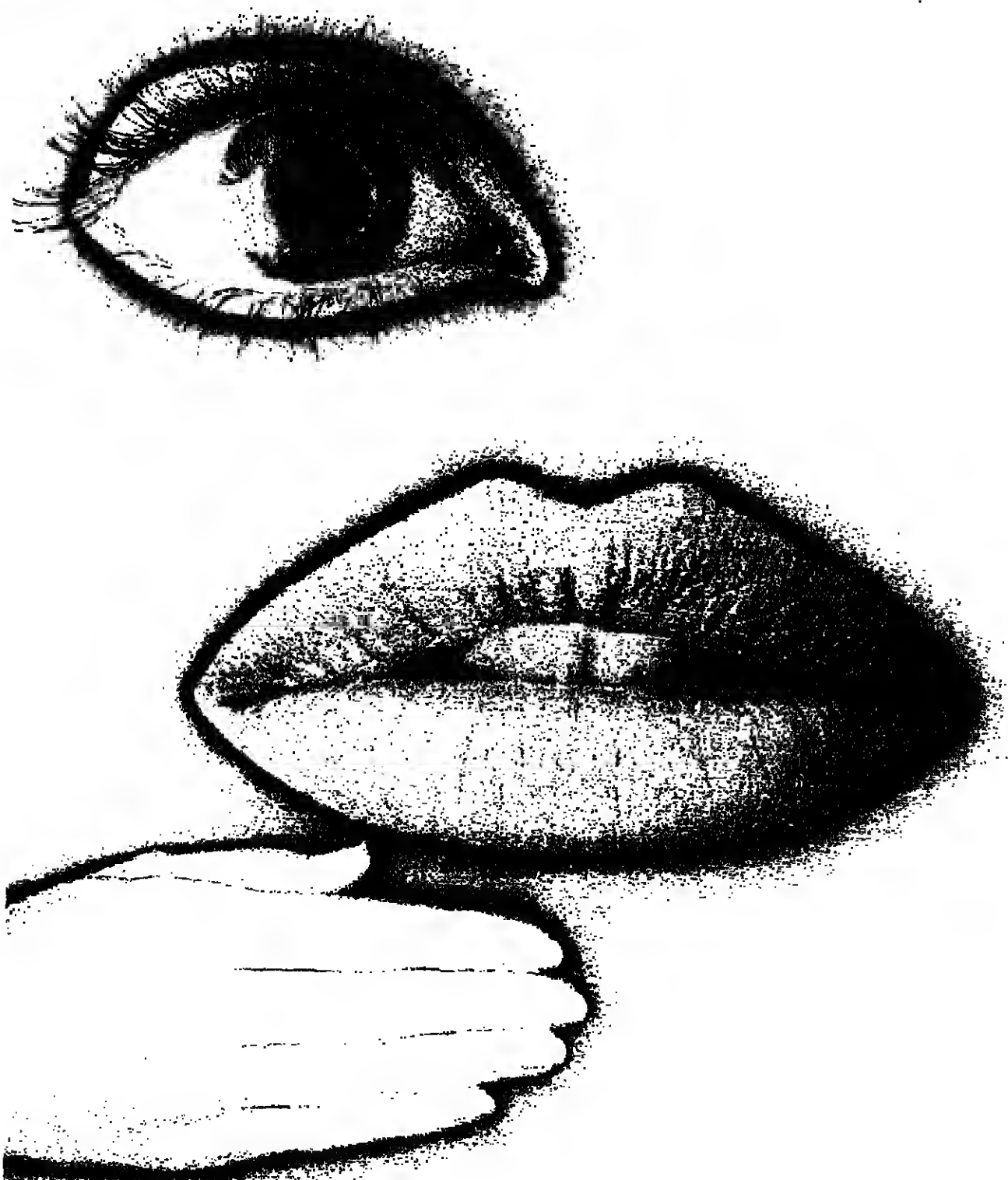
According to *The Computer Paper*, the founder and publisher of Canada's largest computer publication, many successes of this kind do not stay Canadian for very long. Doug

Continued on next page



Tulip Computers' new pocketbook weighing just 1lb 6oz and the size of an A5 notepad, the pocketbook (model 386sl) combines the advantages of an electronic organiser with the power and screen benefits of a standard PC. It links easily into a larger desktop computer at the office.

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VIRTUAL REALITY

Interaction of created worlds

Many advances in computer software have their origins in play. From the early chess programs, which were used to demonstrate the power of electronic brains in the 1950s, to the multimedia shoot-'em-up video games of today, programmers have used games to push the envelope of software technology.

Advances in high-resolution graphics, data compression, animation and user interface design have often been pioneered in games software before making the transition to business. Games and other leisure-based uses of computers have also laid the ground rules for computer-generated, alternative worlds or what has come to be called virtual reality (VR). This new strain of software now promises to open exciting applications in business.

"One way to see VR is as a

Optimists see virtual reality as offering a richer form of communication, but pessimists see it as a disturbing retreat from the grimness of real life. Here, Philip Manchester looks at one of the likely growth markets of the next decade

magical window on to other worlds from molecules to minds. Another way to see VR is to recognise that in the closing decades of the twentieth century, reality is disappearing behind a screen," writes Howard Rheingold in his book, *Virtual Reality*.

It could be argued that anyone who sits in front of a computer all day to do their job, already spends much of their life in VR. Even a simple program like a spreadsheet can be engrossing enough to its user to suspend physical reality.

The convergence of computers and communications pushes this even further. Bulletin board systems and networked chatlines are now well

established in the US and growing fast in Europe. Network services like the Internet, CIX and CompuServe have created a multitude of widely-dispersed, electronic communities, each with their own culture. The phenomenon has spawned a new language, a literary sub-genre (*cyberpunk*) and the idea of an ultimate virtual nirvana called *cyberspace*.

There is, of course, not just one virtual reality, but many. At one extreme, it is possible to become immersed in VR by using an enclosed helmet with a built-in display and sensor devices which can pick up body movements.

At the other end of the spectrum, a serious desktop flight simulator such as Microsoft's package for the PC, can be just as convincing.

VR purists argue that immersion is the only genuine VR experience and there is research into all-over body suits which can take this to its logical conclusion. The aim is that such a suit should act both as sensing device to transfer body movements to the computer and also to convey a sense of touch.

Sensor suits to transmit body movement are already available. At the Virtual Reality Expo show in London in February, for example, the UK company Virtual Presence launched a 750 gram, Lycra suit equipped with 96 sensors, and there are others available in the US.

Work is also under way to build systems which can respond to objects in VR and transmit this sensation back to the user. Researchers at the University of North Carolina, for example, have built a device which can be used to manipulate images of molecules with a full feedback system. The Argonne remote manipulator (ARM) is used to explore possible combinations of molecules for new anti-cancer drugs. If the properties of

the molecules do not allow them to fit together, the resistance is conveyed back to the user as a physical force.

There is also some speculation in fringe literature about the possibility of direct connections from the human brain to VR systems - thus eliminating the need for a suit.

At a more mundane and practical level, less intrusive VR software is now within the reach of the PC user - mainly for games - but increasingly for other activities such as mail order shopping or travel planning. Desktop computers are now powerful enough to handle high-quality, three-dimensional graphics and convey an impression of space. It is now possible to walk around buildings which do not exist, fly a jumbo jet through a thunderstorm and visit places on the other side of the world without leaving your desk.

The concept of VR has, of course, been around for some time. The well-established flight simulator, for example, has been used for training pilots since the early days of flying. More recently, simulated environments have been devised for other training activities - such as working in hazardous environments.

What marks out the new generation of VR software is that it goes beyond merely representing the physical world - like a flight simulator - or creating a possible future with a spreadsheet. VR enables the creation of worlds which do not exist and allows interaction with them.

This has spawned a generation of software tools which can help to visualise data in new ways.

Superscape, a VR tool from the UK company Dimension, has been used, for example, to show the effects of drugs on the human body. The software allows a user to navigate around a representation of the

body and see the effect of a drug down at the molecular level.

"The market is only now becoming aware that VR products are available for low-cost computing. Once their eyes are opened to it, the ideas come rushing in. We have about 30 applications built with Superscape and most of them have come from customers," says Mr Ian Andrew, managing director of Dimension.

In addition to the drug simulation VR, which is being used by SmithKline Beecham, Superscape has been used to build VR environments as diverse as a telecommunications network simulation for British Telecom and an exhibition modelling system for Dragon Exhibitions.

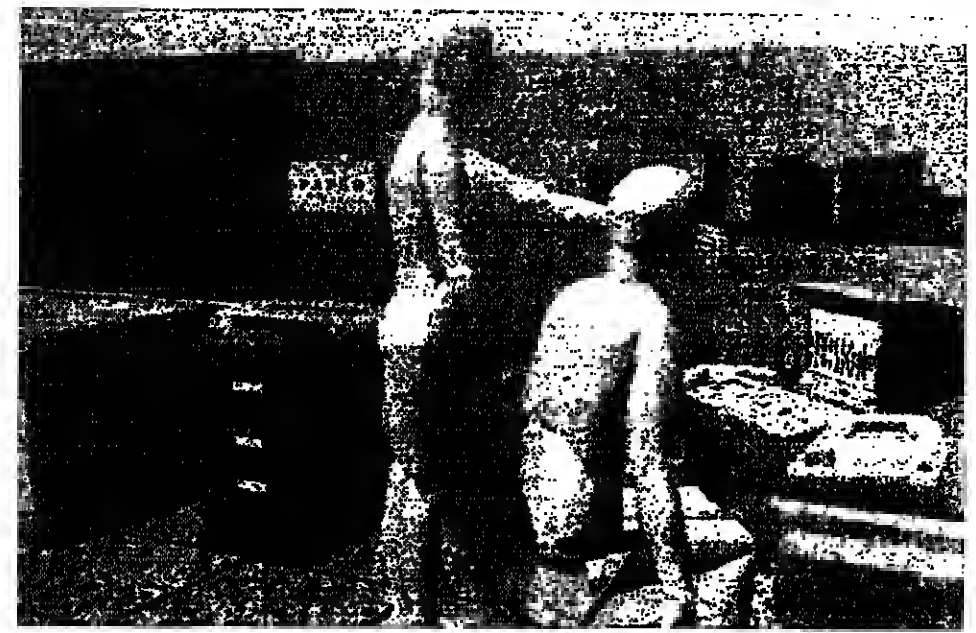
Although Superscape can support the more exotic VR peripherals, such as headsets and sensors, Mr Andrew says that the demand is for applications which are non-immersive and based on the desktop: "Immersive VR was what caught people's imagination in the first place - but most people are uncomfortable with it. I'd say 90 per cent of what we do is for the desktop. But we have left room to support the other devices and can offer users an upgrade path when they need it," he explains.

Faberl, another UK VR specialist has built a multimedia virtual exhibition system (VES) which re-creates the sound, look and feel of an exhibition floor. Virtual visitors to the show can walk up to a virtual computer screen and see a demonstration of a product.

"The interaction between people and machines is what is important about VR. It lets you create spatial relationships which is very appealing - people understand the rules of space," says Mr Perry Huber, a consultant with Faberl.

"Proper VR allows you to move around in free form - like surrogate travel."

Mr Huber also sees VR changing the way we use computers and improving the user interface: "One of the obvious things in the business environment is that you can get way from simple graphical user



The virtual reality office: the £2.5m Virtual Office project is developing a computer-generated environment where users can collaborate, regardless of location. The computer screen on their desk will not only give the latest financial figures, but it will provide a window on to a virtual office, spanning the whole organisation. A user will be able to move about this virtual office to interact and talk to virtual colleagues. The project, involving a consortium of universities and companies, led by BT, is supported by the UK government.

interfaces. The three dimensionality lets you bring a context to data and visualise it better."

Data visualisation in three dimensions might seem far fetched. But imagine explaining what a spreadsheet program could be used for ten years' ago.

VR offers the same potential to change the way data is viewed and presented.

Software developers are already experimenting with the possibilities. Maxia, a US software company, has built a VR package which simulates the Wall Street Stock Exchange in the form of a casino. Prospective investors can risk their funds and enjoy themselves at the same time.

The market for VR products like these is expected to grow quickly over the next few years and an increasing percentage of revenues will come from commercial applications. Market researcher Frost & Sullivan (F&S) forecasts a growth rate of 65 per cent a year in the US market, with revenues exceeding a billion dollars by 1997.

Leisure-based applications are expected to dominate throughout this period and show the largest growth.

Another US market researcher - 4th Wave - estimates that 70 per cent of 1993 revenues for VR products came from the entertainment sector and this

will increase to 76 per cent by 1997.

But commercial applications of VR technology on the desktop are likely to be the most profitable - with training, data visualisation and computer-aided design leading the way. Specialised commercial applications which can harness the power of VR software will sell at a premium.

The parallel growth of high bandwidth telecommunications and multimedia technology - both of which provide the infrastructure for VR applications - promises to make the market for VR software one of the most exciting growth areas into the millennium.

VR could also precipitate change in wider context.

The pessimistic view is that it will lead to the disturbing future described by Aldous Huxley where people hide from the grimness of the physical world at the 'teelies'. The optimistic view is that VR will enable humans to find a richer form of communication, unimpeded by the laws of the real world.

One thing is clear, an increasing amount of communication between humans will be mediated by computer software and, even when this is not called VR, that is exactly what it will be.

Success for a VR software developer

The City gives its backing

The business opportunities that virtual reality software technology can offer were underlined recently by the public flotation of the UK company, Virtuality Group.

It came to the London Stock Exchange in October 1993 with a share price of 170p, valuing the company at \$44m and turning its founders into multi-millionaires, writes Philip Manchester.

Since then, the share price has doubled and Virtuality is seen as a hot investment.

Started as W Industries in 1987 in the classic computer industry style - in a garage on the outskirts of Leicester in the UK - Virtuality earned revenues of about £5m last year from sales of VR equipment and software, placing it among the world leaders of the emerging VR industry.

Its customers include Matsushita, MCA Universal Studios and games company Sega. Virtuality has also attracted investment funds from IBM and Motorola, and has ambitious plans in the VR software industry.

Cofounder and managing director Dr Jonathan Waldren is reported as saying he wants the company to be the Microsoft of VR.

Virtuality's current products are at the high end of the VR market. The company concentrates on what it calls leisure products - although its definition includes education applications, as well as advertising and promotional tools.

Virtuality's primary product is an 'immersive' arcade game machine which sells for £25,000 upwards.

Sega plans to install Virtuality games in the 'super-arCADEs' it is building worldwide.

The VR Quayside is being used to view how the development will look in advance and sell it to prospective investors.

Philip Manchester



Flying the network: this is an experience that will enable telephone engineers to have an overview of complex telecommunication structures. This virtual reality desktop system, now being developed by BT, allows users to interact with a three-dimensional model of the network

Search for venture capital

Continued from previous page

las Alder, who founded The Computer Paper seven years ago, says that moderate success is quite commonly followed by US corporate acquisition.

He says that even raising initial venture capital is a tough slog for most Canadian developers and entrepreneurs. "There just aren't enough millionaires in Canada," he says. And even when Canadian companies do achieve moderate success, there is no "peer group of aspiring billionaires" willing to spend the money, time and energy to help grow the Canadian companies - "most companies don't make it," Alder says.

And when they do make it, they often become American companies in due course. Take the case of Softimage, the Quebec-based computer animation specialists, recently acquired by US software house Microsoft for \$130m.

In this case, Softimage will be allowed to stay in Quebec and pursue its existing business - while its technology will also be incorporated in future Microsoft products. Microsoft has been quite active in the Canadian technology sector. In 1991 it purchased Consumers Software, another Canadian company, and turned it into its first big North American research and development facility outside the United States.

Based in Vancouver, it now employs more than 100 people and has been renamed Microsoft Workgroup Canada.

"We see a bright future for Canadian business and the local personal computer industry," says Mike Maples, executive vice-president at Micro-soft.

"The Canadian personal computer hardware and software market is one of the most advanced in the world."

But being a Canadian personal computer hardware manufacturer is a tougher business. Ask, for example, Benjamin K. Tam, president and chief executive of Burnaby, British Columbia-based Darius Technology.

Tam has been making and selling personal computers in Canada for more than six years, but admits that it is a tough market - particularly when many Canadians can shop quite easily for US computers over the border.

Tam says that the recent Canada/US/Mexico North American Free Trade Agreement (Nafta) does not make this job any easier.

"In the Canadian market, we are affected by the economic situation of our giant neighbour, the US, as well as by the agreements and government policy of the Canadian government," he says.

"Nafta could affect us severely in the high technology sector. Although we are known to be strong in the telecommunications side, we are not at all competitive (in the computer market) because the sheer volume is not there in Canada."

One solution has been to sell recently-developed products, including a network file server

system based on Digital Equipment's powerful Alpha AXP computer processor, in both the US and Canada.

As a result, Tam now boasts that 22 per cent of his company's annual sales are in the US, with the rest in Canada. And in the near future, he is expanding to the Far East - a move becoming increasingly popular among Western Canadian companies.

Tam recently signed a \$1.5m joint venture agreement with a state-owned enterprise in China. It will begin manufacturing computer displays in Shanghai this summer. Tam says that these products are being made for both the Far East and North American markets.

In short, while Canada has the resources and the talent to create world-class high technology companies, it may have to move quite quickly to sell products outside its borders if these talents are to survive.

With a domestic market of only slightly more than 28m people, spread over thousands of miles, this is perhaps not surprising.

In terms of land mass, Canada is the second-largest country in the world - and distribution costs can be high. But judging by the successes of Debrina and the Ottawa-based Corel Corporation (developer of the popular Corel Draw software and now owners of the Ventura Publisher desktop publishing suite) Canadian companies can succeed on the world market.

The secret is to be there from day one.



The Picasso system

AT&T's Picasso still-image phone, above, allows users to send full-colour, TV-quality still pictures, using an ordinary phone line - while simultaneously talking over the same line. The system, priced at \$3,295, takes about ten seconds to transmit a single image. The intended market is for engineers and other professionals needing fast transmission of detailed images.

The device looks like an office phone, but contains a data modem and transceiver. To transmit a picture, users plug in a video camera, photo compact disk player or digital still camera. On the receiving end, a computer monitor or TV set displays the picture.

Clever software helps cut the cost of virtual reality

A new world on your desktop

One of the most important recent developments in Virtual Reality (VR) is the fall in prices of hardware and software packages. VR systems demand large computer resources and high-quality input and output - which has been expensive until recently.

But advances in hardware technology, such as faster PC processors, larger capacity

storage and graphics software have made desktop systems possible.

The most important element is the clever software which is needed firstly, to build a virtual reality to suit a specific need and, secondly, allow a user to visit and interact with it.

UK-based software developer Dimension sees a growing opportunity in the emerging commercial market for VR

tools on the desktop.

Its Superscape package, which sells for around £3,500, can be used to build specific VR environments on a desktop computer.

The package has a broad range of users from British Telecom, which has built a virtual network with Superscape, to the Shepherd School, which is using VR to help children with learning difficulties.

One of the more exciting applications of Superscape is Tyne and Wear Development Corporation's creation of VR model of the \$180m Quayside development in Newcastle.

The VR Quayside is being used to view how the development will look in advance and sell it to prospective investors.

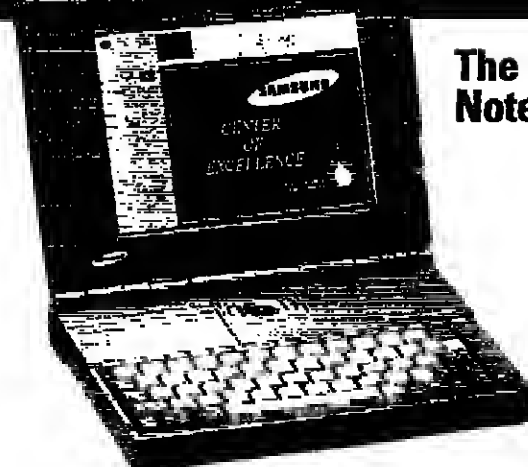
Philip Manchester

Masters of the screen

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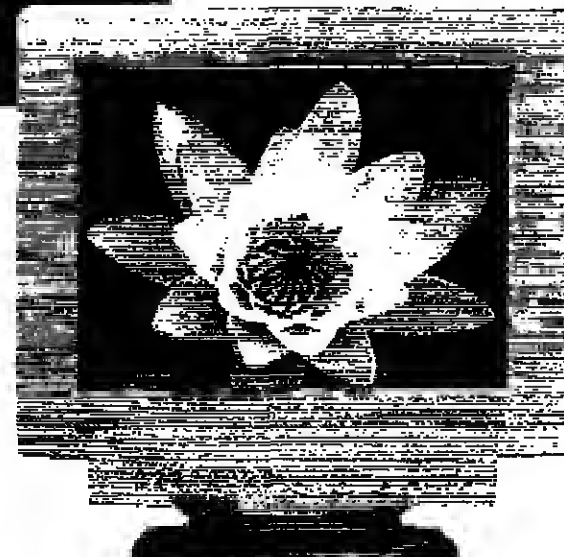
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Information and communications technology 18

■ FACTORY OF THE FUTURE

A central link in the chain

After 20 years of dramatic developments in the information technology used by manufacturers - from the earliest computer-aided design systems to modern relational databases and shopfloor management systems - there is no let-up in the pace of change.

Information technology (IT) vendors still see plenty of opportunities to fulfil the changing needs of manufacturing companies, while the customers are reacting to the disappointments of the past by taking steps to ensure their IT needs really are met in future.

It is partly because of past disappointments, and the fact that previous investments are no longer compatible with newer technologies, that spending on IT by manufacturers remains a high priority.

According to a MORI survey last month for the ASK Group, developers of business software, and the accountants Coopers & Lybrand, 85 per cent of 100 companies picked at random from the UK's top 1,000 manufacturers expect to invest heavily in IT in the next five years - and 80 per cent of managers expect to spend more than £1m.

Most of Britain's leading manufacturing companies expect to invest heavily in information technology in the next five years, reports **Andrew Baxter**. The most popular planned investments are manufacturing management systems

The most popular planned investments are manufacturing management systems, where 73 per cent plan to spend money, and supply chain systems to improve performance, where 62 per cent expect to invest.

This year's Computers in Manufacturing Show, at the National Exhibition Centre, Birmingham, from November 22-24, will demonstrate some of the state-of-the-art IT products seen by industry as a priority for their broader business needs. Examples are virtual reality and rapid prototyping tools to improve and accelerate product development, and just-in-time software which allows manufacturers to operate lean production techniques.

These and other technology developments now becoming available provide some clues as to what will be the IT needs of the factories of the future.

Mr Graham Williams, managing director of AT&T Intel's

manufacturing division, believes the next five years could be exciting because of the products which IT vendors are offering industry in order to help to tackle key manufacturing problems.

The need for manufacturers to get closer to consumers has spawned the concept of the extended enterprise in which not only suppliers, but also distribution, is included. For example, says Mr Williams, IT can be used by brewers as a means of viewing the hop-grower and also the public house as part of its enterprise.

Similarly, the generation of electronic point-of-sales data can produce a works order, and in turn create all the orders for materials and sub-assemblies. This would aid the lean production process, as manufacturers would only be making what their customers were buying.

All the technology to do this exists, says Mr Williams. Indeed, it is already happening to some extent in the food

industry, and will start to happen very quickly in the process industries.

Mr Cliff Shaker, managing director of AT&T Intel's Rover division, sees an increasing need for IT applications that can be applied horizontally across processes rather than simply used to improve the performance of individual functions or departments.

Also, as customers increasingly dictate what happens in factories, they will use IT to inject their requirements straight into manufacturers' production schedules. Moreover, the development of massive databases provides the basis for neural networks which can aid decision-making by tapping into past experience.

IT users in manufacturing, too, have been thinking about the next steps in their use of manufacturing technology. The most important initiative among users is the AIT project - advanced information technology in design and manufacturing - which is headed by Daimler-Benz and stems from users' demands for more effective IT and better integration of systems at different sites.

The pilot phase for the project, which comprises 16 aerospace and automotive companies from six countries, began last November and the overall aim is to strengthen the competitiveness of key European industries by three consecutive action in three areas.

First, the initiative will seek to establish a consensus among European industrial users of IT on their most important future requirements for design and manufacturing.

Secondly, it will seek an agreement on these requirements with the IT vendors, and, thirdly, an IT research and development initiative will be launched to support the commonly-agreed requirements.

Significantly, the initiative's backers say they want it to become a substantial user force recognised by the IT community, to ensure that future products meet users' requirements.



Information technology vendors still see plenty of opportunities to fulfil the changing needs of manufacturing companies. Above: an aerospace engineer uses a power desktop Compag PC, the Deskpro 486/33, to carry out computer-aided design and engineering applications.



Keeping the goods moving: Sand Three Radio is specifically designed for fleet communications between vehicles and their base. In addition to voice communications, it provides a range of data facilities such as the Radiotext service, featured above, allowing rapid transmission of text messages and reports



Stock control: In Bristol, a Rolls-Royce Aerospace engineer uses a recently installed Reflex computer system to check the inventory of fabricated aero-engine products. Reflex Manufacturing Systems, based in Crawley, is a software house which specialises in manufacturing control and shop floor scheduling systems. It is a subsidiary of Rolls-Royce Aerospace.

■ FAST SOFTWARE DEVELOPMENT

Finding solutions takes time

In the ultra-competitive business world of the 1990s, a company's ability to create new information systems rapidly is a pre-requisite for survival.

The key is to find ways to build application software which are both flexible and scalable. Object-oriented computing, which sees an information system as a set of self-contained components, is the most promising approach and it is steadily gaining favour with both software developers and users.

Fast software development is a priority for both groups. A survey of delegates to last October's 'Objectworld' conference in the UK, for example, cited "flexibility to change" and "reduced time to market" as the two main reasons for adopting the object-oriented.

Object-oriented computing is widely acknowledged to be the future direction for software development and most software developers have pledged their allegiance to the cause. The Object Management Group (OMG), an industry organisation which promotes

Object-oriented computing is widely acknowledged to be the future direction for software development. But discovering ways to build software fast is a painstaking process, says Philip Manchester

object-oriented computing, now claims 370 members and points to growing attendance at shows and exhibitions.

The object-oriented approach is making the running at both extremes and is central to any debate on speeding up the production of software.

There are several reasons:
□ Firstly, object-oriented systems are built from sets of components which can be re-used elsewhere.

This speeds up the development of new applications and makes existing ones easier to maintain.

□ Secondly, object-oriented systems operate in a way that makes software "portable" to other platforms and preserves investment in application software.

□ Thirdly, objects reduce

the complexity of applications software by enforcing tight design disciplines.

□ Most importantly, object-oriented development techniques make it easy to build prototype systems to demonstrate to users - which is widely acknowledged as one of the keys to speedy application development.

"I think rapid application development is as much about the approach as it is about the tools you use," says Mr Vic Morris, UK managing director of tools specialist Powersoft.

"As far as possible you want to break the application down to make it easier for end users to do it themselves.

"If you look at what many users have done with their PCs - building complex applications with spreadsheets, for example - you can harness that talent," he goes on.

Thinking of applications in terms of objects is the key, according to Mr Morris.

"In the past, we viewed applications as a set of functions like, say, an order processing system. It was very structured. Now with objects, we can think in terms of business processes and put in place applications which can support them," he explains.

Mr Morris also places emphasis on the "scalability" of applications. This means, for example, an application program built for two or three users on a small network should be able to cope with hundreds - or even thousands - of users on a much larger system.

"We have recently re-positioned our Powerbuilder tool set to reflect this. So you can start with a cheap desktop version and move up to a full networked version and keep the same applications," Mr Morris says.

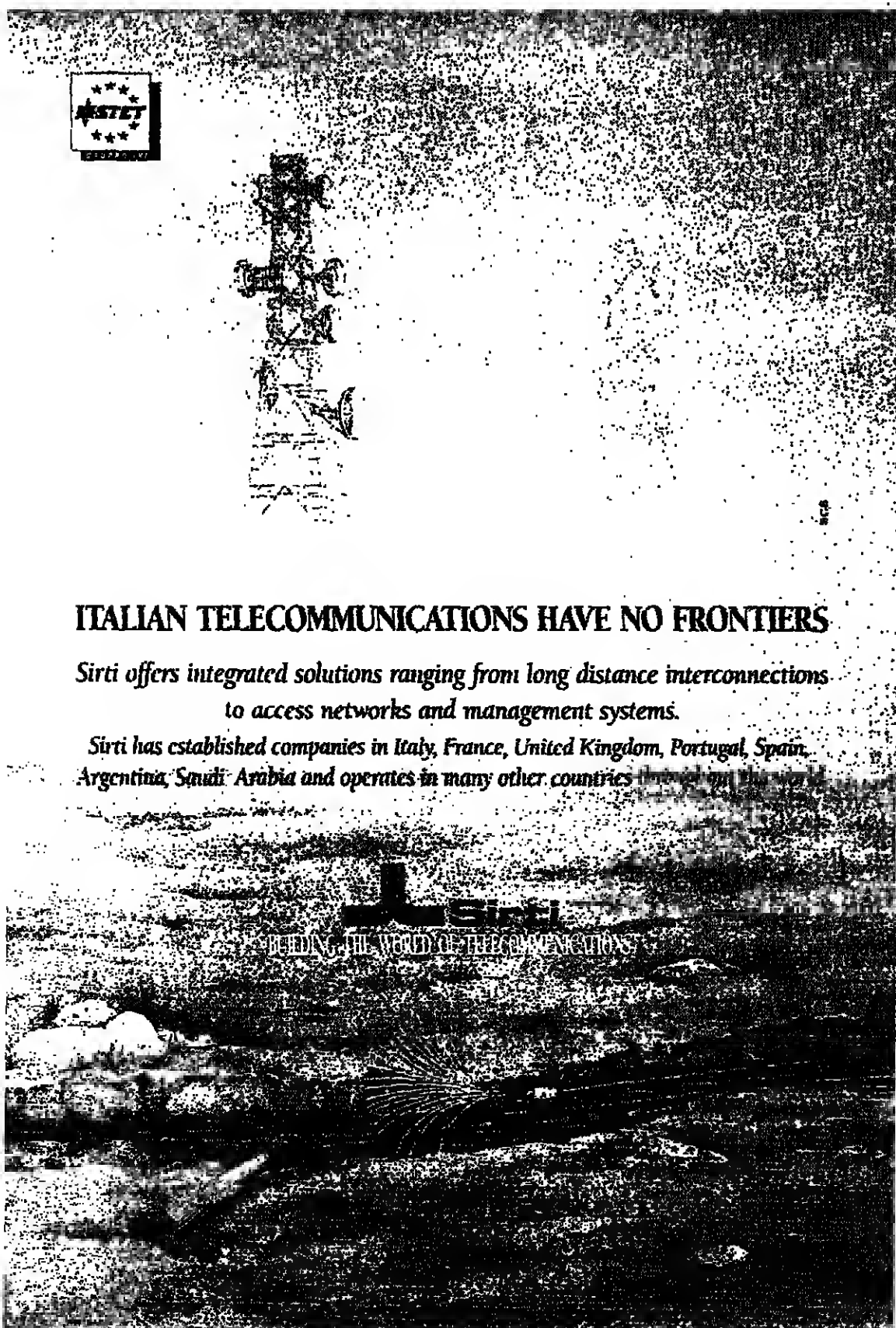
Other tool vendors have taken a similar approach because it can speed up production of larger systems if

Continued on facing page

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Information and communications technology 19

NEWS IN BRIEF

Most finance directors are dissatisfied with data management

Despite the widespread acceptance of information technology, more than half of the finance directors in a recent poll of top companies are still dissatisfied with the quality of their current information management.

This is one of the findings of a survey by the independent research group, MRD, which targeted financial directors from 100 leading companies in the UK.

While more than half the companies are now using their own internal IT department's resources to develop their strategies for information technology, only 13 per cent say they use an external IT resource.

Together, these companies represented an investment in IT of more than £175m.

The survey, commissioned by European Software Publishing (ESP), says that 99 per cent of respondents felt that personal computers had made their work more productive, but the time-factor - not 'technofear' - was seen as the greatest restraint on the wider use of technology.

"Even though the technology is sitting on their desks, still relatively few managers are using the communications and information-sharing capabilities of information technology," adds the report.

"Large amounts of their day are spent in communicating - meeting, telephoning, and so on - with their workgroup colleagues, but few are fully using technology to support and enhance these activities."

More details on the ESP Report from Sarah Howe, A Plus Group on 0753 790 700.

Outsourcing contract with Ford of Europe

Ford of Europe's parts and services operations division has signed a five-year outsourcing contract with Computer Sciences Corporation (CSC), one of the world's leading suppliers of IT services.

CSC will provide Ford with IT services throughout Europe and take responsibility for applications development,

sales analysis and accounting. CSC won almost £1bn of outsourcing business in Europe last year.

Pioneering with the cordless office

While most office workers are still 'tied to their desks' by fixed telephones, a new generation of cordless telephone systems is set to open up a market worth up to \$5bn a year by 1998, according to Ericsson, a pioneering company in this sector.

Ericsson began developing business cordless phone systems in the mid-1980s and claims to be the first company to launch a DECT-based system, last year.

This Freeset system works as an "add-on" to a company's existing phone network. Low-powered radio base-stations are installed throughout the premises, and controlled from a radio exchange, which connects directly to the host telephone system. The main groups of users are organisations with a large number of mobile staff - such as hospitals, factories and exhibition centres - where instant communication is important.

The second main group of users are companies which are trying to redefine the nature of office work, applying the 'hot desk' principle. Digital Equipment Corporation, using the Freeset system, has been successfully experimenting with a similar concept which it calls 'the natural office' at its Swedish offices in Stockholm.

"Once people start using a cordless phone at work, it's impossible to take it away from them," comments Ericsson's Hans van der Hoek. In five years' time, he expects one-third of all business phones sold will be cordless.

Digital's investment in Scotland

Digital Equipment Corporation, a leading supplier of network computer systems, has announced an investment package of more than \$90m for its Scottish manufacturing sites in Ayr and South Queensferry.

Mr Chris Conway, managing director of Digital UK, says this investment confirms the company's commitment to manufacturing in Scotland where it makes a range of products from silicon chips to implemented computer systems - "half of Digital's revenues come from Europe and the UK leads the field in both sales and manufacturing," he adds. Digital's total investment in Scotland stands at £300m.

The latest investment package involves more than 55m

for the South Queensferry facility. This will increase production capacity for the Alpha AXP silicon chip.

Quicker calls for Whitehall

GPT Communication Systems has won a large order from the Central Computer Telecommunications Agency (CCTA) for the supply, installation and maintenance of a new computerised telephone directory serving all 62 government departments in Whitehall.

The new system enables operators based in the Treasury to reduce response times significantly for about 5,000 enquiries each working day.

Mr Peter Spencer of the telecommunications division of the CCTA, explains: "With over 30,000 people working in more than 60 different departments, our original system of using up to 12 paper directories had become too slow and cumbersome, with an average response time of 25 seconds - too high for what is essentially a public service."

The new system allows the CCTA to locate individuals and redirect calls in a fraction of the time, eliminating caller frustration, he adds.

New paging system for Dutch prisons

The Dutch group Telecommunicatie and the Swindon-based company Blik Televisie have won a contract to upgrade potentially life-saving radio-paging systems installed in Dutch prisons.

Since 1986, the two companies have held the contract to supply radio-paging systems to 30 of the 45 prisons in Holland. But an unprecedented series of attacks on prison guards forced the Dutch ministry of justice to put out a tender for a more sophisticated system to be developed.

Hostage situations have resulted in serious injury and even loss of life. The new paging system is marketed abroad under the title, Bodyguard. Location signals can be sent out by the pagers each time a guard passes one of the many location code transmitters installed in prison buildings.

The pagers also register the last two locations of the user in case of emergency and loss of contact. This data is relayed to a computer terminal programmed to show the location of all guards, using a schematic display of the prison.

Others features include a "man down" alarm, triggered by a floating mercury switch, a silent hostage alert button.

Michael Wiltshire

SYSTEM SECURITY

Weak links mean big risks

As increasing amounts of data are moved around the world, the need to maintain security integrity has become paramount, writes Martin Banks

There is a direct relationship between the number of information tools used by a company and the chances of its information system being insecure.

A single PC used at home can be the victim of the occasional virus, which is often irritating to the user but rarely fatal to the system or the information. For a company with multiple, linked networks of PCs, workstations, departmental servers and enterprise repositories, however, the potential risks can border on the incalculable.

The PC has moved from being little more than a toy used for tactical personal productivity applications to become one of the key strategic tools for delivering meaningful information to users. As such it has moved centre-stage in the on-going struggle to keep information secure and systems up and running.

The problem is, of course, that the PC's history contains nothing to associate it with the concept of security. As security consultant, Robert Schifreen, suggested, even DOS, the PC's native operating system, can be readily re-written to make the machines a source of secure information.

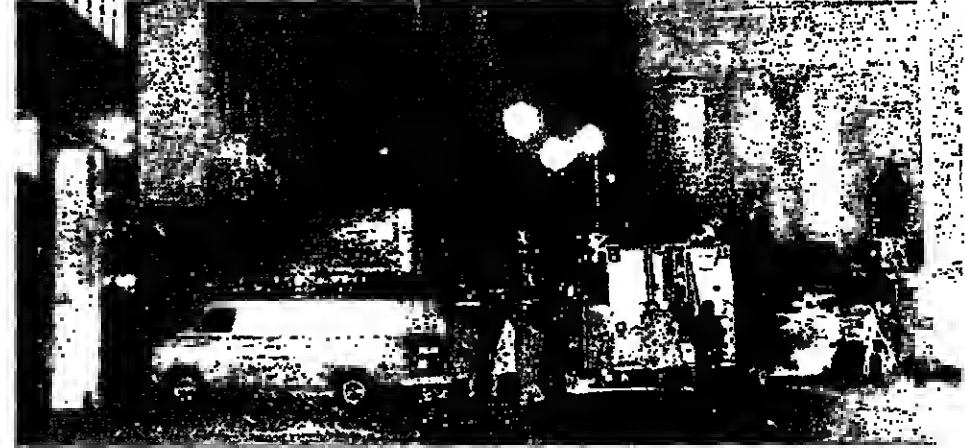
"For example, it is possible

to embed code in the operating system that will log all keystrokes made on a PC," he says. "In that way, log-in sequences and passwords can be recorded for later use."

As increasing amounts of sensitive data are moved around the world using data-communications technologies, the need to maintain security and integrity becomes paramount. This not only affects how users should view the weak links in their information systems - predominantly the PCs being used - but also security at a higher level.

Until now this has started to look like a problem solved. The US Government is, however, currently considering throwing what many see as a large spanner in the works, in the form of what is generally referred to as the Clipper Chip technology.

Currently, many companies regularly employ a data encryption technology known as DES (the Data Encryption System). This is one of several alternatives that are, ironically, published specifications. This would seem to degrade their value, but as Schifreen put it: "Everyone knows how DES works, but it is not easy to crack. It can be done, but it would need a team of programmers a year and a Cray super-



Apart from internal security breaches, larger businesses are taking more seriously the need for electronic back-up services in the event of sudden disruption to their information networks. Pictured here are police vehicles near the New York Stock Exchange after security alarms in Manhattan's financial district.

computer to do it. By being a published specification everyone knows the weaknesses of DES and works to plug them."

The US Government is currently considering an alternative to these encryption systems - based around a hardware chip, known as the Clipper Chip, which would contain the encryption algorithm. A company using the chip would then be able to pass encrypted data to any other using the same system.

What has upset users, according to Schifreen, is the fact that the US Government is considering passing use of this CIA-developed encryption technology into law. All US data-communications users would then be legally obliged to employ Clipper, which would mean that recipients around the world would also be obliged to use it. What makes the situation worse is the fact that Clipper is a proprietary system, and that the CIA has written a back door into the technology allowing information to be decrypted.

The fear is that, either through theft, or the actions of a disgruntled employee, this code could fall into the wrong hands. Another fear is that, because it is from the CIA, the backdoor code may be made available to other national authorities.

Perhaps most important of all, however, is that because it is a proprietary solution, its method of working and its weaknesses remain unknown. As all encryption systems are ultimately breakable, this is being seen as a serious potential weakness of the system.

As PCs become more prevalent as a strategic tool, other weaknesses may serve to compound the potential problems of Clipper encryption. For example, access control on PCs is still a weak area, though there are now products available to solve the problem, if companies are willing to make the investments necessary.

This may be significant, for the most comprehensive solutions can cost up to £1,000 per PC. Many new PCs come with access control available as standard, but these tend to be simple password systems where the password is stored in a battery-backed CMOS memory. Removing the battery, therefore, will normally circumvent the password.

ment in security is a key factor not always considered by users. This starts with education about the simplest access issues. For example, it is rare for thought to be given to individual passwords and most people make obvious choices. "Many users choose words like FRED, SECRET, PASSWORD and LETMEREIN," Schifreen said, "which are easy to guess."

Even Unix systems, increasingly popular both as workstations and servers, suffer access control weaknesses. For example, there is a well-known bug in Unix Mail which will allow embedded code in a mail message, which runs when the message is read. The code can, for example, request the system to transmit the receiver's password file back to the sender.

It can also be used to transmit a complete system's password listing. This contains user IDs and their apparently safely encrypted passwords. There are, however, shareware products available - such as Websters, a program with 234,000 unique English words - which, when passed through the Unix encryption algorithm, will produce a table against which the encrypted passwords can be compared, and cracked. Using numerals in passwords usually helps solve this problem.

Many such routes into systems can be trapped with sufficient thought and planning by users. For example, an increasing number of these programs are now available from Bulletin Board Systems, so access by staff to such systems must be closely monitored, particularly on the larger networks. One way of doing this is to audit the applications being run.

There is now a new class of application appearing that scans all the disks on a network to locate and report on all applications found. This should include those that are hidden behind filenames that do not include the standard applications file extensions such as .exe, .com and .has.

In this way, systems managers can know the location of all approved applications, as well as those that are not approved. The benefits of this are twofold. Not only are potential security risk applications identified, it also ensures that no illegal copies of applications are being used, preventing possible legal action by the application's authors.

Rise of object-oriented technology

Continued from previous page:

you can start with small ones and "scale" them up.

"All our tools are based on Smalltalk so you can move from our desktop product Rofin to our corporate Synchrooy product," says Mr Jeff Sutherland, vice-president of object development at software tools company Easel.

"But it is not enough just to scale up to a large number of users. You need greater access

to database and tools which can deliver the performance.

"We see the answer in tools which will do 80 per cent of what a user wants automatically. The users can then concentrate on the bits they understand best - the business objects," he says.

Mr Sutherland believes that not enough is being done to promote object technology at the application level. He is part of a group of software developers pushing for the

specification of business-based "objects".

"We have a problem at the moment with object-oriented technology. People talk a lot about code re-use - but where is it?"

"We see the need for reusable business objects which can give different views of the way the business operates to different users," says Mr Sutherland.

There are other, more serious, reservations about the

use of object-oriented design for speeding up software - initially, at least.

"Although object-oriented is the way forward, it is not a panacea. It's a solid framework to build reusable code," says Mr Paul Burford, a systems engineer with object-oriented tool specialist Next Computer.

"In the short term, it is not a quick way to get more out of programmers. Although it reduces the number of lines of code you need to produce, there is much more design input needed."

Mr Burford cites the example of the Swiss Bank which used Next's Nextstep object-oriented tool to build its system.

"When we started at Swiss Bank four years ago we wrote objects that were not reusable so there was no advantage. But they recognised over time that they had chunks of reusable software," he says.

"If you take a new environment it will never be quicker to start with because of testing problems. But by taking an object-oriented approach you have a chance to start putting in new features in a more natural way."

While object-oriented design techniques provide a suitable framework for building applications, the real productivity benefits come from software tools.

Strategies for selecting development tools differ - according to the size and data processing heritage of the individual company.

Larger companies tend to bring in programmer productivity tools so that their information systems departments can respond more rapidly to users' demands.

Smaller companies give their users their own desktop tools. Many companies combine both of these approaches. The result is a growing demand for tools which can support fast software development and there is no doubt that these tools will use object-oriented computing as a starting point.

What is clear, however, is that finding ways to build software fast, takes time.

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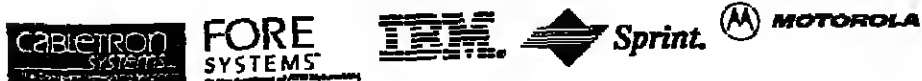
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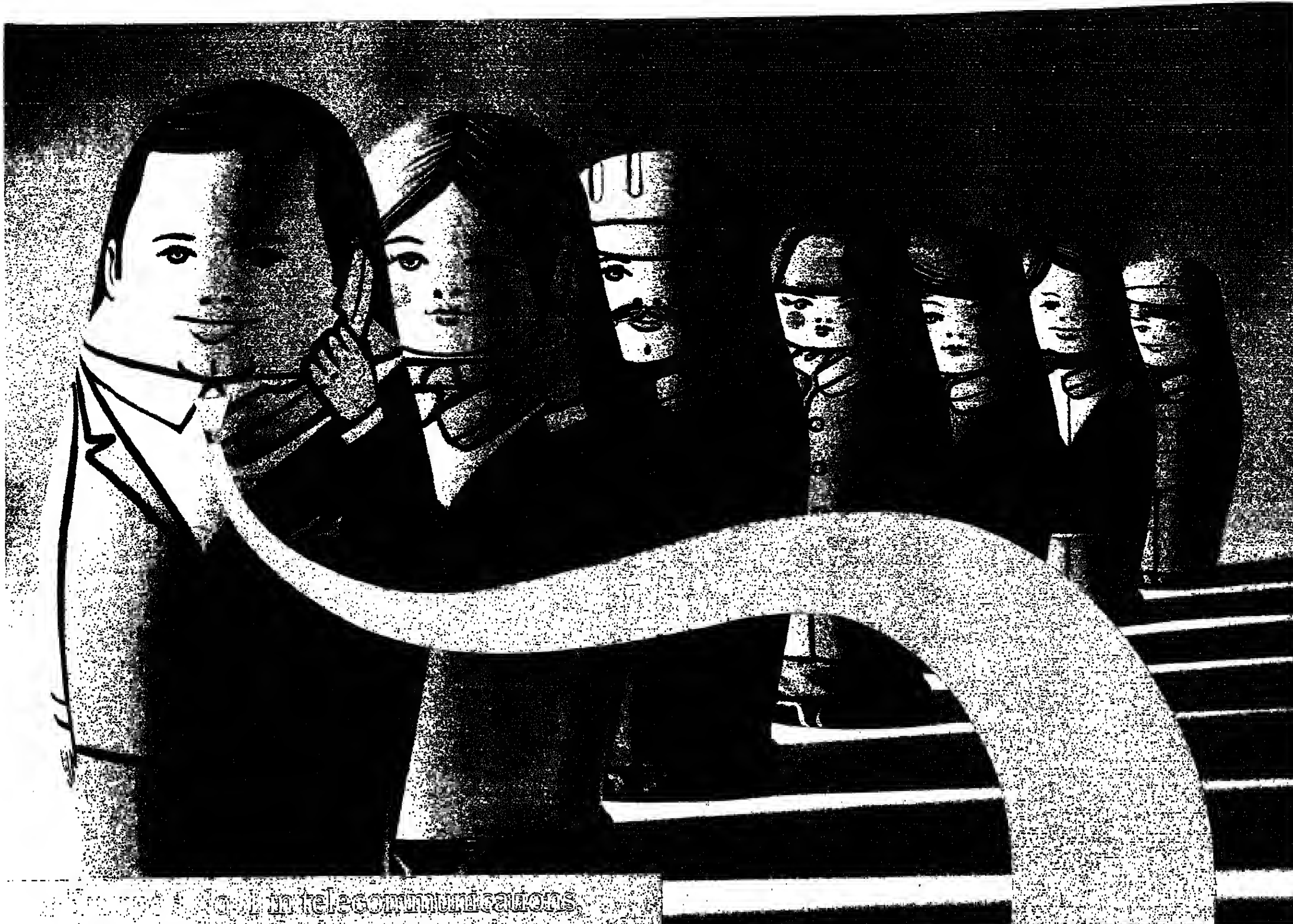
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nications authorities in the east. It is, therefore, no surprise that Telekom is the leading provider of satellite based data networks and services in eastern Europe.

We have many other customized solutions to help you. For example, "Delos" is a Telekom service that has been especially developed for companies who need direct access from eastern Europe to Germany's telephone network and the world beyond. You can enjoy high quality two-way voice, fax and data transfer and avoid the frustration of waiting for a free line.

So – if a demanding communications challenge is looming on your eastern horizon, have a word with Europe's No. 1 – Telekom.

Telecommunications made in Germany.

Whether it's easy access to international telephone lines, or setting up inter-office computer links, fast and efficient two-way communications are an absolute must for western companies doing business in the emerging markets of eastern Europe. Unfortunately, the existing public networks in these countries cannot cope with the traffic demand and this creates a severe problem for many companies.



We tie markets together.

 **Telekom**

Some trading members of United Kingdom's Financial Markets Authority (FMA) are also members of the International Chamber of Commerce (ICC).
 Future-Strategic open systems
 is the key to business

UNIPLEX CASE STUDY: The Foreign & Commonwealth Office

Five year Open Systems strategy starts to pay off

The Foreign and Commonwealth Office is an organisation of some 12,000 people including locally engaged staff based in approximately 250 locations around the world. Because of the difficult security requirements, the FCO had not invested heavily in IT in the early 80s. Systems had been installed on an ad hoc basis, primarily under DOS for its reliability and under DOS for its reliability.

Commenting on the requirements, Jeffrey Ling, Director at the FCO said: "To summarise, the FCO needed a common user interface style for all applications throughout the organisation to obtain the goal of little or no retraining; high system availability; the dependence on reliable suppliers has been reduced; support for user requirements; support for strategic planning. Early in 1988, the FCO adopted an Open Systems technical strategy. By 1992, following an extensive analysis of the IT requirements of the organisation, the Foreign and Commonwealth Office (FCO) published a five year Open Systems IT strategy document.

It was necessary that the Open Systems strategy met a number of specific needs arising from the unique nature of

keeping the individual customers happy.

"The approach taken has been to use not leading edge technology but systems that are proven to support such a complex organisation. The system has to be simple enough for widespread use in remote locations but robust enough to support the security requirements of highly sensitive international communications.

The system has facilitated a significant change in working practices. As systems and user interfaces are consistent and compatible around the world, a mobile officer can be confident that a document composed on a laptop whilst travelling can be easily and securely communicated back to the UK on arrival at a post.

By the late 1990s it is planned that there will be a worldwide interconnected POSIX compliant office system throughout the FCO for the processing and transmission of both secure and non-secure documents. This will also be extended to provide secure communications with other government departments.

UniForum UK hosts monthly briefings

A new series of half-day briefings to be held in London, and other locations should there be sufficient demand, is now being provided by UniForum UK. Under the banner of "Open Forum", the purpose of the programme is to share the message of Open Systems computing.

The purpose of each event will combine formal presentations and panel sessions with impromptu discussions. It is hoped that the programme will foster a vibrant atmosphere and provide a regular meeting place for delegates to learn more about the particular subject under review, and to also discuss individual matters with their peers.

Each briefing will cover one particular topic and it will be targeted at a particular audience, such as top management, IT professionals or users. It is the intention to cover topics of interest to a wide range of users, from Windows NT/NTL to the latest critical, worldwide and thereby, will be open to both members and non-members and will be run as a service to the IT sector. To this end the cost to delegates will be kept to a minimum - £70 for members, £90 for non-members, both prices being inclusive of VAT.

For more information contact UniForum UK on 081-532 0406/0455 or fax 081 532 0448

Open Solutions for the Enterprise

By John Coon, Marketing Director, Data General Ltd.

In the past, the enormous technology have been targeted at existing processes - doing things faster, more accurately and more reliably. Most organisations still conduct business using the same procedures, though departments are motivated and empowered to perform effectively. If managers can also provide the freedom to exchange knowledge and experience, the culture of the business is changed.

Across Europe, many organisations are already using the latest advances in information management to change business processes, often tackling activities in ways previously thought impossible. The redesigned processes are giving these organisations significant market advantages.

It is in this environment of change, to achieve competitive advantage and more efficient and effective business processes, that Open Systems technology is playing a key role.

Business productivity, the quality of customer service, and ultimately company profitability, are the key objectives that are the only part of the "profit" world are now readily available.

Technology has now advanced into a new arena enabling companies to reassess the ways in which business is conducted. Although this technology is just being implemented, it is clear that it will have a profound impact on the way business is conducted.

As it has grown, the Internet has changed from an academic and research oriented network to a secure and reliable medium for business communication. The academic and research communities are still significant, and parts of the Internet are still funded. However, parallel commercial services exist in most countries, and companies like PPPX, are able to provide highly reliable and secure Internet access to companies which do not wish to build their own networks.

While there is still a wide ranging debate about the evolution of the Internet, commercial use, once the focus of so much argument, is now dominant.

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The Business of the Internet

By Bill Thompson of Computer College (UniForum Group)

It is barely a quarter of a century since the first computer networks were developed by academic researchers who wanted to connect their computers. Now networks are central to many business IT systems. More and more of these networks are being connected to the Internet.

The Internet is not a single network but a network of networks spanning the globe. It provides the computer equivalent of the telephone system, permitting any computer to communicate with any other computer, wherever it is located. The Internet can be used for file transfer, database services, news and weather reports, and even "desktop publishing".

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would have required mainframe processing. AEGON recognised that customers prefer to take out insurance with companies which provide fast competitive quotations and efficient service. By installing a network of servers, AEGON is able to deliver information close to the point of sale where the decision-making is a key factor in winning new policy holders. Local staff are linked directly to Madrid and are able to process policies and claims instantaneously. New policies, formerly served in months in development, can now be delivered for each customer within a matter of days giving AEGON a head start in responding to market changes.

A major British bank recognised that companies must change methods of doing business to suit their customers. Abbey National formed a separate telecommunications division to handle a growing range of products including mortgage, insurance and other financial services by telephone. "Telemarketing relies on rapid response and the efficient delivery of information to the point where customer enquiries are handled.

Computer-supported telephone based on open Unit servers is playing a major role in making Abbey National direct one of the bank's most profitable operations. Calls are answered by a powerful Unix system running automated financial specialists enjoy rapid response when extracting or entering customer details in the course of a sales call. The system also quickly refreshing releases screens with relevant scripts and customer information.

Verity Hopkinson has a high reputation for the quality, speed and accessibility of its financial and business information services. The publisher's large data banks hold share prices, company results, a who's who of business together with comprehensive details of products and markets. Customers throughout many European countries rely on this information to guide their investment, acquisition and marketing decisions.

The transfer of its databases from mainframe to Unix servers has enabled Hopkinson to give customers direct access to information sources and much more sophisticated search facilities. This fits well with the company's overall business objective to deliver the highest quality information matched precisely to customer requirements.

Steniska, a prestigious, reformed, the Swedish employers' confederation, experienced difficulties in disseminating information to its member organisations. Complex reports on economic trends, industrial conditions, remuneration, investment and

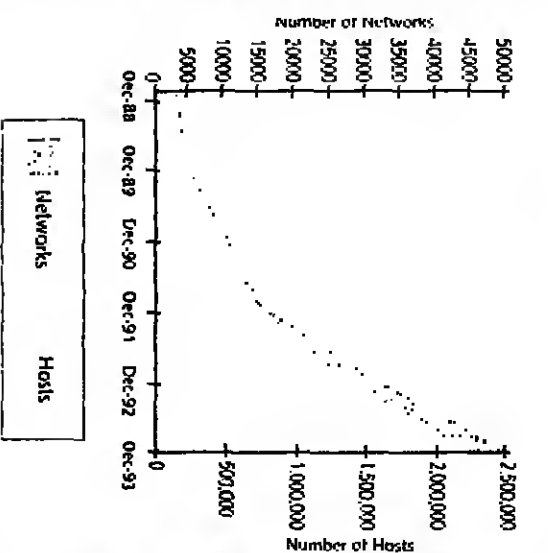
to empower managers to achieve local performance and budget objectives, a network of over 200 Unix servers has been designed to handle departmental computing requirements. Financial and operational improvements have already been experienced in personnel and procurement.

Unit quite recently electronic mail was limited to standard, called MIME

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Saripah Saripah of Malaysia captured enjoying her recent training programme at ICL in Bristol, England. She was learning how to create effective business solutions as an OPEN/Network Practitioner. This new breed of systems integrator work from the OPEN/Network Centres which ICL has established in every continent of the world. Saripah is now back in her local centre in Kuala Lumpur, helping her clients create leading-edge systems for real competitive advantage.



NOVELL The Past, Present and Future of Network Computing



For more information contact UniForum UK on 081-532 0406/0455 or fax 081 532 0448

Taking the open route with UniForum UK

by Martin Barcks, Editor, Open Forum.

At least of them is that, as the industry moves toward adherence to a single, unified specification for the Unix operating system (itself the key to most Open Systems solutions), one of UniForum UK's closest allies is the organisation with the task of ratifying the standard: X/Open.

"Perhaps the most important reason," Flexxon suggests, "particularly for users, is the development and promotion by UniForum UK of a set of Trading Standards. These comprehensively cover all aspects of Open Systems trading, from how systems trading, from how to choose an Open System supplier through how to ensure that end users are trained properly."

Even here the need for open communications between the users and suppliers underpins the standards that UniForum UK has defined. For example, it is self-evident that such standards should ensure the suppliers provide solutions that are fit for the task, and that they are well supported. But it is equally important that the standards ensure users have a clear understanding of what it is they are buying and why.

This is the spirit in which UniForum UK stands for Open Systems is all about collaboration, and UniForum provides the meeting ground on which the users and suppliers can discuss their problems, communicate their needs, and ultimately collaborate on providing effective solutions for them.

Information on the wide range of activities and services provided by UniForum UK is available on tel: 081 332 0455 or fax: 081 332 0448.

There's no longer any doubt that IBM's approach to open distributed computing is focused on customer needs. Its leading technologies and expertise are being brought to bear on the development of open systems, not in a mythical future, but today.

Right from the start of the open systems movement, IBM has been opening up its systems by building in open standards conformance (eg. AIX on RISC System/6000 and Open Edition/MVS on its mainframes). Responding to the reality of the marketplace, IBM has licensed best-of-breed products from other vendors, as in the case of Hewlett Packard's OpenView. IBM is also licensing its industry-leading technologies, such as CICS,

Open distributed computing: IBM puts the focus on the user

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ORACLE CASE STUDY: DHL DHL Accounts for Growth

Faced with a 25 per cent growth in one year, DHL decided to implement a fully integrated accounting system to meet the financial and management reporting responsibilities of its 17 European offices. It turned to Open Systems and Oracle technology and is already beginning to reap the benefits.

DHL employs more than 20,000 people worldwide, serving some 80,000 locations in over 200 countries and ships more than 80 million packages daily.

Like any large successful organisation, DHL believes that its company's IT strategy has to be closely aligned to its business if it is to be truly effective.

In 1991, faced with the amalgamation of its European and African operations, DHL decided to review its IT needs and look to the future. At that time, DHL's business systems were based on IBM System 36 proprietary technology. As the business was growing, managing information increasingly became a major task.

Realising that the company needed to share information on a European and global basis and reporting is reviewed from the original source data, the integrity of the data is validated as it is entered into the system and the security of the data is maintained by the system. It is the business systems that keep abreast of the demands of the market—consistently providing applications to support the business.

According to DHL's financial systems manager, Lesley Hancock, "We needed a single technology in hardware and software, the business will gain advantages in the stability of the system, the speed of processing, and the accuracy of the data, giving management up-to-date information to ensure that the best possible results are achieved."

Hancock concludes: "On a European level, when all the systems have rolled out, we will begin to see the benefits of consistency, accuracy and timeliness of data. The quality and quantity of information we will be able to extract from the system will be a significant improvement on the old system's accounting history and will go a long way to increasing our efficiency and competitive edge," she said.

The project implementation is well advanced. DHL is now using Oracle for its accounting and financial systems. The system is being rolled out to all European offices. The project is expected to be completed by the end of 1992.

Differentiating Home Services with Client/Server systems

by Emma Mansell-Lewis

Foundation's Distributed Computing Environment. "I see Open Systems as an architecture within which every type of system can play a part," said Skelley.

Each branch was to be provided with a server and several PCs to provide local power to manipulate information. IBM mainframe. The company also evaluated mainframe upgrade options and dismissed it. He said the client-server approach: "We have to give branches the necessary various information and connect systems we are currently running." He insisted, "We need a new set of systems and applications for sales and to utilise customer data, providing front end information, back end support and removing the manual task load."

The decision was taken to implement a two tier client/server system. Home Services Systems began developing its new Customer Information System, CIS, following early prototype trials. Prudential believed its CIS solution lay in the Open Software networks.

been actively involved in the porting or development of database solutions, and is able to deliver a range of solutions to the levels needed by the largest users.

With the announcement last year of the Goldrush initiative, ICL has staked its claim to be at the forefront of the commercial application of these technologies.

Goldrush is a relational database server, designed to sit in front of a corporate database, providing a 6000 transaction per second, many times greater than conventional Unix servers.

ICL has made a major investment in Goldrush technology, and has a range of software and other functions essential to corporate IT customers.

A database server of this scale needs powerful client systems with equivalent levels of corporate strength. ICL's own mainframe users, of course, are able to link Goldrush directly into their existing systems. But users of competitive equipment will need a different solution.

ICL has an agreement to work with Pyramid Technology Corporation on the development of a 'combined' product comprising a powerful user interface and a 'combined' database. This combined product will produce a Unix solution with both the performance and the credibility to tackle work previously possible with these database vendors have

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Can Unix challenge the corporate Mainframe?

by Peter Slavid, Corporate Systems Business Manager, ICL

Over the past few years, Unix has dominated the market and established a presence on the desktop. But, at the centre of large organisations, there has always been a reluctance to adopt Unix. Large companies have preferred to stick with the mainframe for their large mission critical applications.

There have been good reasons for this. Building corporate systems from multiple vendors' systems is often a bad fit with the real corporate management overhead.

Unix, Symmetric Multi-Processor (SMP) systems have been ideal for the larger Unix user, but cannot, and never look likely to, reach the levels of performance achieved by the largest mainframes.

Massively Parallel Processing (MPP) technology has always promised better performance but has never been delivered with the reliability, features, which the serviceability and involving the micro-processor user has been able to achieve. Even the parallel world has required users to do special programming.

But now all this is changing. It is now clear that MPP technology will be the future of corporate computing. With the

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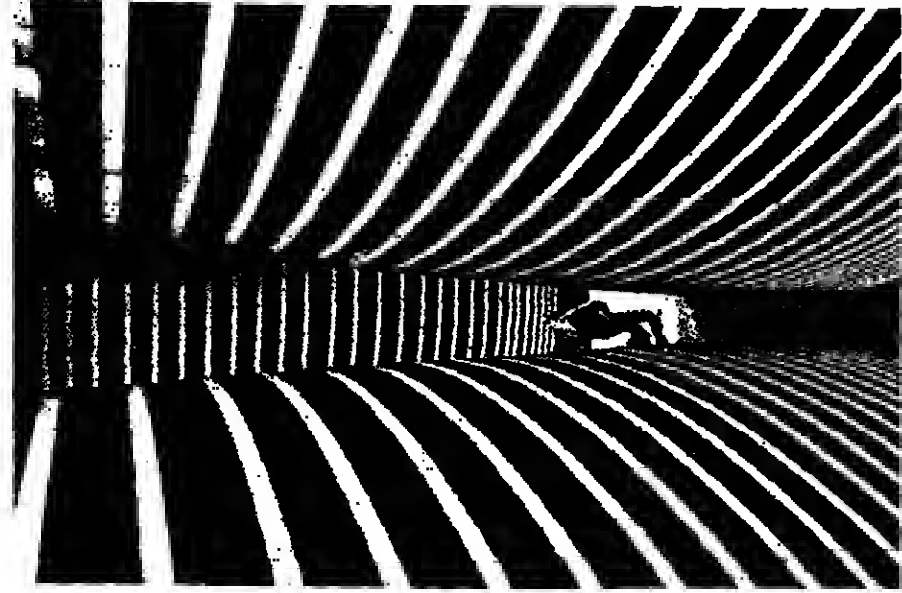
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Mario Wyss, I.T. Director, HP Bulmer. Cider producer, HP Bulmer requires information systems healthy enough to support its leading position in a volatile industry. Owing to an open systems strategy, based on Oracle and Unix, Bulmer expects to halve its hardware and software maintenance costs over five years. This has changed the way IT is viewed, from a cost burden to a vital ingredient to Bulmer's commercial success.

For further information, please contact:
Oracle: UK 0344 860666

BRINGING THE WORLD TOGETHER

Open Systems is a great value for the integrated world of corporate communication. This means that almost any computer and communications with other computers, anywhere in the world, at negligible cost.

Since 1985, UniForum has emerged as a leader in the field of bringing the world to the workplace. It is now the only and technical support to help you to achieve the top and different world of PC and Unix computing, and to mention proprietary environments such as: MVS, VM, z/OS and JCL.

It also offers a specialised consultancy on interconnectivity of computer systems. UniForum Consulting provides strategic and practical advice plus product evaluation and implementation services for IBM, local and international organisations.

In addition to the developed suite of today's most innovative communications software for example, it has established a reputation for its expertise in the field of real time systems, such as: AIX, HP, and IBM.

Multi package it the first to integrate both IBM and extended MVS messaging standards, enabling MVS users to send email from PC applications, and giving low cost access to UniForum.

The same company provides technical education through Computer College, which was amongst the first commercial quality training provider in the UK to meet customer needs through open learning systems. UniForum is now the only company offering a truly innovative, through to 1993, training solutions.

To reach more than 25,000 members and a team of advisors in over 100 countries, UniForum has a global network of sales and service centres.

UniForum Group Ltd, 11, GERRARD ROAD, HAYES, MIDDLESEX, U.K. (W5 1NU)
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